BEFORE THE
ILLINOIS COMMERCE COMMISSION

IN THE MATTER OF:	)	
	)	
COMMONWEALTH EDISON COMPANY	)	
	)	
VERIFIED PETITION TO DETERMINE THE APPLICABILITY OF SECTION 16-125(e) LIABILITY TO EVENTS CAUSED BY THE AUGUST 23, 2007 STORM FRONT.	)	No. 07-0491

Chicago, Illinois
August 13th, 2008

Met, pursuant to notice, at 9:30 a.m.

BEFORE:

GLENNON P. DOLAN, Administrative Law Judge

APPEARANCES:

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I N D E X

Witnesses:	Direct	Cross	Re-direct	Re-cross	By Examiner
Cress	73	76,90	93,94	94	
Krishnasamy	73	76,90	93,94	94	
Lanzalotta	95	97,125	131	136,137	
Linkenback	138	141			
Segneri	150	155,202	225	231	

E X H I B I T S

Number	For Identification	In Evidence
ComEd Exhibits	3.0 & 3.01	76
AG Cross-Exhibits	1 & 2	95
AG Exhibit Nos.	1.0 and 1.1 - 1.7	97
ICC Staff Exhibit Nos.	1.0 & 2.0	140
ComEd Staff Exhibits	1.0, 1.01, 1.02 & 2.0	153
ComEd's Verified Petition		154
ICC Staff Cross-Exhibits	1 - 4	202
AG Cross-Exhibits	3 & 4	232

JUDGE DOLAN: By the direction and the authority of the Illinois Commerce Commission I call Docket No. 07-0491, Commonwealth Edison Company, a Petition to Determine the Applicability of Section 16-125(e), Liability to Events Caused by the August 23rd, 2007 storm front.

Would the parties please identify themselves for the record.

MR. RIPPIE: On behalf of the petitioner, Commonwealth Edison Company, Glenn -- two n's -- Rippie, R-i-p-p-i-e and Carla Scarsella, Foley & Lardner, LLP, 321 North Clark Street, Chicago, Illinois 60610. Also appearing at times during the day will be Darryl Bradford and Doug Graham from Commonwealth Edison Company.

MR. GRAHAM: 440 South LaSalle 60603 -- 60605.

JUDGE DOLAN: All right.

MR. LANNON: Appearing on behalf of the Staff of the Illinois Commerce Commission, Mike Lannon and Carmen Fosco, 160 North LaSalle Street, Suite C-800, Chicago, Illinois, 60601.

MR. MOSSOS: On behalf of the People of the

State of Illinois, Elias Mossos, M-o-s-s-o-s, 100 West Randolph Street, 11th Floor, Chicago, Illinois 60601.

MR. NEILAN: On behalf of the Village of Deerfield, Paul Neilan -- the Last name is N-e-i-l-a-n -- of Giordano & Neilan, G-i-o-r-d-a-n-o & Neilan, Limited, 360 North Michigan Avenue, Suite 1005, Chicago, Illinois 60601. And also Ms. Catherine Gallagher, G-a-l-l-a-g-h-e-r. She's a summer clerk with us who is actually a lawyer in Ireland and will be observing the proceedings.

JUDGE DOLAN: Okay. I think she was with us the last time we were here banging heads.

So welcome back.

Let the record reflect there are no other appearances for the record and we're ready with our first -- we have panel witnesses Steven Cress and Settiana Krishnasamy.

All right.

MR. NEILAN: Just for the record, the Village of Deerfield will not be having cross for any of the witnesses.

JUDGE DOLAN: Okay. Well, that cuts out a lot of time right there.

MR. RIPPIE: Your Honor, would you like to swear all of the witnesses in -- because I believe they're all in the room -- at once for efficiency?

JUDGE DOLAN: That's fine. I can do it that way. Okay.

(Witnesses sworn.)

JUDGE DOLAN: All right. We'll present our first witnesses here.

MR. RIPPIE: The Company's first witnesses are the panel of Mr. Steven Crest and Dr. Settiana -- who goes by Sammy -- Krishnasamy.

STEPHEN LEONARD CRESS and

DR. SETTIANA KRISHNASAMY,

called as witnesses herein, having been first duly sworn, were examined and testified as follows:

DIRECT EXAMINATION

BY

MR. RIPPIE:

Q Would you please state and spell your full legal names for the court reporter.

MR. SETTIANA KRISHNASAMY: Settiana G. KRISHNASAMY, S-e-t-t-i-a-n-a, G., K-r-i-s-h-n-a-s-a-m-y.

MR. STEPHEN CRESS: Stephen Leonard Cress, S-t-e-p-h-e-n, C-r-e-s-s.

MR. RIPPIE: Gentlemen, have you prepared -- caused to be prepared under your direction and control testimony to be submitted to the Illinois Commerce Commission in this proceeding?

MR. SETTIANA KRISHNASAMY: Yes, we have.

MR. STEPHEN CRESS: Yes.

BY MR. RIPPIE:

Q Is a copy of that testimony before you this morning?

MR. STEPHEN CRESS: Yes.

MR. SETTIANA KRISHNASAMY: Yes.

BY MR. RIPPIE:

Q Is that testimony the document that is designated as Commonwealth Edison Company, Exhibit 3.0 together with its attachment designated as Commonwealth Edison Company, Exhibit 3.01, the attachment consisting of a total of 35 pages?

MR. STEPHEN CRESS: That's correct.

BY MR. RIPPIE:

Q Do you have any additions or corrections that you wish to make to Commonwealth Edison 3.0 or 3.01?

MR. SETTIANA KRISHNASAMY: No.

MR. STEPHEN CRESS: No.

BY MR. RIPPIE:

Q If I were to ask you the same questions as appear in Commonwealth Edison Exhibit 3 today, would you give the same answers as appear in that exhibit?

SETTIANA KRISHNASAMY: Yes.

MR. STEPHEN CRESS: Yes, I would.

MR. RIPPIE: That's all the direct examination I have for the panel. And I will offer into evidence ComEd Exhibits 3.0 and 3.01, subject of course to cross.

JUDGE DOLAN: Any objections?

(No response.)

JUDGE DOLAN: ComEd Exhibit 3.0 and 3.01 will be admitted into the record.

(Whereupon, ComEd Exhibit Nos. 3.0 and 3.01 were admitted into evidence.)

JUDGE DOLAN: And Mr. Mossos, do you want to go first?

MR. MOSSOS: On behalf of the Illinois Attorney General's office, I only have a few questions here.

CROSS-EXAMINATION

BY

MR. MOSSOS:

Q Is your testimony limited to addressing the issue of crossarms only?

MR. SETTIANA KRISHNASAMY: No. We looked at also the poles.

BY MR. MOSSOS:

Q But the only interruptions you address were those then that were caused by the failure of crossarms and poles only?

SETTIANA KRISHNASAMY: Yes, it's limited to the crossarms and poles.

BY MR. MOSSOS:

Q On Page 1 of your ComEd Exhibit 3.01, which

I believe is the analysis, it states that there were -- Page 1 of Exhibit 3.01 it states in that first paragraph that there were about 79 interruptions that were caused by crossarms.

Do you know how many customers were affected by these 79 interruptions?

MR. STEPHEN CRESS: The paragraph indicates 79 interruptions associated with crossarms as opposed to caused by crossarms.

BY MR. MOSSOS:

Q Correct.

MR. STEPHEN CRESS: No, I don't know at this moment the number of customers associated with those outages.

BY MR. MOSSOS:

Q Do you recall if that number would appear anywhere in your testimony?

MR. STEPHEN CRESS: Our direct testimony, no. I don't believe it's there in our report. Although, it is certainly in our other evidence.

BY MR. MOSSOS:

Q And have you read the testimony of Illinois

Attorney General witness Pete J. Lanzalotta (phonetic)?

MR. STEPHEN CRESS: Yes, we have.

MR. SETTIANA KRISHNASAMY: Yes we have.

BY MR. MOSSOS:

Q And have you also examined the exhibits attached to his testimony?

MR. STEPHEN CRESS: Yes.

BY MR. MOSSOS:

Q Have you read all of the data requests and responses to the data requests that are involved in this proceeding?

MR. SETTIANA KRISHNASAMY: The data was recorded from our other testimony.

BY MR. MOSSOS:

Q Have you seen -- were those the only data requests you saw, the ones directed to your testimony; or have you also reviewed data requests that were sent between other parties in this case, other witnesses?

MR. STEPHEN CRESS: We have seen the data requests indicated as 4.10 to 4.08, I believe.

BY MR. MOSSOS:

Q On Page 2 of your rebutted testimony you state that the design life of poles and crossarms exceed 50 years; is that correct -- I believe on Page 2?

MR. SETTIANA KRISHNASAMY: Page 2.

BY MR. MOSSOS:

Q Of the rebutted testimony?

MR. SETTIANA KRISHNASAMY: Yes. I'm looking at it.

MR. STEPHEN CRESS: 3.0?

BY MR. MOSSOS:

Q Yes.

MR. SETTIANA KRISHNASAMY: What's the line number -- okay. 42.

BY MR. MOSSOS:

Q Yes.

Is that correct?

MR. SETTIANA KRISHNASAMY: Mm-hmm.

BY MR. MOSSOS:

Q And referring your attention to ComEd Exhibit 3.01, that would be your analysis on Page 9,

it states that there is no basis -- the very last sentence says, There is no basis to conclude that ComEd should replace all or most crossarms after 25 to 35 years or that ComEd's usable to crossarms cause or lengthen interruptions during the storm; is that correct? Page 9 of 35 of Exhibit 3.01, that's the analysis, Page 9.

MR. SETTIANA KRISHNASAMY: Yes.

BY MR. MOSSOS:

Q I would like to show you -- have you seen what has been filed as Attorney General Exhibit 1.4 that was attached to the testimony of Pete J. Lanzalotta?

MR. STEPHEN CRESS: Labeled Section G of the ComEd report?

BY MR. MOSSOS:

Q Correct, that would be it?

MR. STEPHEN CRESS: Yes, we have seen that.

MR. MOSSOS: I only have a few copies. Does anybody need one?

MR. RIPPIE: 1.04; right?

MR. MOSSOS: Correct.

MR. LANNON: If you have an extra one, I could use it.

BY MR. MOSSOS:

Q On Page G3 of this report, the third page, does it say this is a detailed analysis of the age of ComEd's system?

MR. SETTIANA KRISHNASAMY: In the beginning of the Page 3?

MR. STEPHEN CRESS: The second paragraph.

BY MR. MOSSOS:

Q Do you see where it says that?

MR. SETTIANA KRISHNASAMY: Yes.

MR. STEPHEN CRESS: Yes.

BY MR. MOSSOS:

Q And doesn't this detailed analysis also state that, Our distribution system crossarm show a median age of 30 years, on G3 in the last paragraph, second sentence -- I'm sorry I'm looking at -- I apologize -- Page G5, the second sentence under crossarms.

But your testimony is that crossarms exceed -- their useful life exceeds 50 years; is that

correct?

MR. SETTIANA KRISHNASAMY: Yes, it is. They are designed for 50 years, along with the pole.

BY MR. MOSSOS:

Q But your testimony is different from ComEd's actual experience, is it not?

MR. SETTIANA KRISHNASAMY: No, that's the age of the poles that are in service. It's not the age of the pole that are damaged or repaired.

BY MR. MOSSOS:

Q Okay. So you state that the -- your testimony is that the age of the crossarms that were in need of replacement due to the storm system, the average life those was 50 years?

MR. SETTIANA KRISHNASAMY: When we design a pole line, we design with crossarms. So they are designed for 50 years of fiscal life.

MR. STEPHEN CRESS: The document you're referring to indicates the median age of poles -- of crossarms that ComEd has in service. That does not necessarily indicate the age at which crossarms -- or the median age at which crossarms need to be

replaced. It's simply the age -- the median age of crossarms in service at ComEd.

BY MR. MOSSOS:

Q Looking at Figure 6 on that Page G5, isn't it true it shows there are no crossarms in service past 50 years?

MR. SETTIANA KRISHNASAMY: No. If you see, there are -- this particular part was done not for the purpose of after 60 years -- or 50 years in service. They would not come to do the -- this is not used for the life of the crossarms. It's the age at which crossarms are in service.

BY MR. MOSSOS:

Q And your testimony deals with the useful life, not actual age?

MR. SETTIANA KRISHNASAMY: The useful life. And also from experience during pole testing and crossarms for the last 20 years, they have been in service longer than 50 years in many cases.

BY MR. MOSSOS:

Q And you also state that wood poles last for 50 to 80 years in your testimony; is that correct?

MR. SETTIANA KRISHNASAMY: Yes.

BY MR. MOSSOS:

Q I would like to show you AG Cross-Exhibit 1. Isn't it true that this shows that ComEd's experience with wood poles or that the average age of wood poles is between 32 and 38 years?

MR. SETTIANA KRISHNASAMY: I think what we're talking about are two different things here. These are the age of the poles that are in service. They are not the poles that are being used to full of life. They're not.

What we're talking about in our testimony is that we have seen poles in service in up to 8 years. So this is -- according to my understanding, there are so many poles in service for so many years; but that doesn't mean they are bad ones.

BY MR. MOSSOS:

Q Your testimony is that these poles reflected here might last up to 80 years?

MR. SETTIANA KRISHNASAMY: Some of them could, yes.

BY MR. MOSSOS:

Q And do you know how often crossarms are inspected?

MR. SETTIANA KRISHNASAMY: There are two types of inspections: One is the line crew walks along the lines. They have a set of crosswalks to follow. They check all the components on the system. And then every 10 years they test also the strength of the pole and other things every 10 years. So based on that, they'll decide whether the crossarms should be there.

BY MR. MOSSOS:

Q The first type of inspection, do you know how many years that occurs?

MR. SETTIANA KRISHNASAMY: Every 3, 4 years -- 2, 4 years.

BY MR. MOSSOS:

Q But no longer than 4 years?

MR. SETTIANA KRISHNASAMY: From experience, no.

BY MR. MOSSOS:

Q And have you seen this document before?

MR. SETTIANA KRISHNASAMY: Yes.

BY MR. MOSSOS:

Q And if you could flip through it, there are certain lines that are underlined. Isn't it true that these are -- this reflects that some of the poles were not inspected within 4 years prior of the actual storm system?

MR. SETTIANA KRISHNASAMY: We don't have that type of information.

BY MR. MOSSOS:

Q For instance, on Page 4, do you know when the storm system occurred that is the subject of this docket?

MR. SETTIANA KRISHNASAMY: August 23, 2007.

BY MR. MOSSOS:

Q When you look at the bottom of Page 4 where it says Circuit C80, isn't it true that that was last inspected May 2003 which would have been longer than 4 years prior to the storm?

MR. SETTIANA KRISHNASAMY: Just about 4 years. You cannot really say exactly within 4 years, if you're testing it. I don't think -- in my opinion, I don't think that's fair -- that's an oversight.

THE REPORTER: I'm sorry. What was the last part?

MR. SETTIANA KRISHNASAMY: That's an oversight by ComEd.

BY MR. MOSSOS:

Q And, finally, if I could point your attention, again, to ComEd Exhibit 3.01, Page 11 of your report, who prepared this graph -- or the picture that appears in middle of the page, Figure 5.

MR. SETTIANA KRISHNASAMY: Figure 5.

BY MR. MOSSOS:

Q Page 11.

MR. SETTIANA KRISHNASAMY: This was given to us by ComEd, and we checked this -- cross-checked this with the NOWA data from the database.

BY MR. MOSSOS:

Q And could you please tell me what does "circuit patrol" mean.

MR. SETTIANA KRISHNASAMY: "Circuit patrol," it means you -- the circuit -- you see whether there are any poles and crossarms.

BY MR. MOSSOS:

Q And that's something that ComEd did, not NOWA?

MR. SETTIANA KRISHNASAMY: No.

BY MR. MOSSOS:

Q Do you know what date this reflects?

MR. SETTIANA KRISHNASAMY: This date reflects, I think -- my understanding is it reflects the time during which they are shown.

BY MR. MOSSOS:

Q Do you know precisely what time this was taken?

MR. SETTIANA KRISHNASAMY: We don't know.

BY MR. MOSSOS:

Q Do you know what the wind speeds were in the various regions that are on the bottom red line beyond the color copy?

MR. STEPHEN CRESS: Yes, we do. We independently checked the wind speeds in the various operating areas of ComEd in August 23rd to August 28th period. And from the NOWA Web site correlated those wind speeds with the particular areas where

there was storm damage.

BY MR. MOSSOS:

Q And was that the only investigation you conducted of the wind speeds?

MR. STEPHEN CRESS: We correlated those wind speeds with the crossarm outages, and in the table on Page 6 of our report.

BY MR. MOSSOS:

Q When it discusses a tornado in this graph, when he tornado struck down, it did not travel the length of this long line in the middle of the page towards Lake Michigan, did it?

MR. STEPHEN CRESS: No, I don't believe so. The tornado touched in some of the particular areas where there was wind damage.

BY MR. MOSSOS:

Q It says brief tornado here. Do you know how long it lasted?

MR. STEPHEN CRESS: No, I don't. But with tornado winds even a very brief preferred high wind would be sufficient to damage poles.

BY MR. MOSSOS:

Q And do you know what time it touched? Do you know?

MR. STEPHEN CRESS: No -- I'm sorry -- not offhand.

MR. MOSSOS: I think that was my last question. Could I check something off the record.

(Whereupon, a discussion was had off the record.)

MR. MOSSOS: No further questions. Thank you very much.

JUDGE DOLAN: Mr. Lannon.

MR. LANNON: Thank you, your Honor.

CROSS-EXAMINATION

BY

MR. LANNON:

Q I represent the Staff of the Illinois Commerce Commission, and I have a couple of hopefully short questions for you.

Dr. Krishnasamy testifies that he's an expert in structural wood components and the performances of wood poles and crossarms. I was

wondering, Mr. Cress, do you have an expertise that's reflected in ComEd Exhibit 3.01, a particular expertise?

MR. STEPHEN CRESS: My expertise is in the area of asset condition assessment methodologies, looking at the condition and degradation of power distribution system assets from a more general level. And does Dr. Krishnasamy is the wood pole and crossarm expert.

BY MR. LANNON:

Q You're not an attorney then; right?

MR. STEPHEN CRESS: Definitely not.

BY MR. LANNON:

Q Is there anything in ComEd Exhibit 3.01, your analysis, that has any bearing on ComEd's interpretation of 16-125?

MR. STEPHEN CRESS: Can you rephrase that or maybe be a little more specific. I'm not too familiar with the other document that you referred to.

BY MR. LANNON:

Q Okay. Well, let me give you a little

background. As your counsel explained earlier -- I think we were off the record -- there was a motion for bifurcation here. There's essentially two issues: The weather waiver issue and what Staff has called the legal liability determination request, which is essentially opposing interpretations of Section 16-125 of the Illinois PUA.

And I'm just wondering did you prepare ComEd Exhibit 3.01 to support ComEd's interpretation of 16-125?

MR. STEPHEN CRESS: No. The document was prepared in response to Mr. Lanzalotta's testimony in order to look at the causes of the wood pole and crossarm failures during storms. That was the purpose of the report.

BY MR. LANNON:

Q So if a Commissioner were reading your introduction -- and here I'm looking at the second sentence where you use the word "discrete" in front of "interruptions," -- that Commissioner shouldn't look through Exhibit 3.01 for any support for the usage of the word "discrete" relative to ComEd's

interpretation of 16-125?

MR. STEPHEN CRESS: No. The intention there was simply to indicate there were several thousand individual interruptions.

MR. LANNON: Thank you. That's all I have.

JUDGE DOLAN: Thank you.

Any redirect?

MR. RIPPIE: I believe two questions, your Honor.

REDIRECT EXAMINATION

BY

MR. RIPPIE:

Q Gentlemen, if you could pick up again what I believe is AG Cross-Exhibit 2. To be clear, that is the response to Attorney General Data Request 4.03, the thicker of the two, and start a Page 1.

Now, that response indicates that ComEd performs inspections, quote -- ComEd's performs inspections of its circuits on a calendar year basis with inspections due on December 31st of that year.

Could you please page through the attachment from Page 1 through Page 20 and indicate

to me whether there's even one circuit in that document that doesn't show an inspection within 4 calendar years.

MR. SETTIANA KRISHNASAMY: No, there isn't.

MR. RIPPIE: Thank you. That's all I have.

MR. MOSSOS: Your Honor, can I just recross on that one question?

JUDGE DOLAN: Sure.

RECROSS-EXAMINATION

BY

MR. MOSSOS:

Q Can I refer your attention to Page 11, the very first line, what is the date of that, the very first line, G995 Circuit?

MR. SETTIANA KRISHNASAMY: 2002.

BY MR. MOSSOS:

Q June 26, 2002; correct?

MR. SETTIANA KRISHNASAMY: That's correct.

MR. MOSSOS: Thank you very much.

FURTHER REDIRECT EXAMINATION

BY

MR. RIPPIE:

Q To be clear, Mr. Mossos is right. There is one circuit, that's the 500-odd circuit that appears in this chart that is beyond 4 years; correct?

MR. SETTIANA KRISHNASAMY: That's correct; that's the one circuit.

JUDGE DOLAN: Are you going to admit your cross-exhibit into the record?

MR. RIPPIE: No objection.

JUDGE DOLAN: Okay. AG Cross-Exhibit No. 1 and Cross-Exhibit No. 2 will be admitted into the record.

(Whereupon, AG Cross-Exhibit Nos. 1 and 2 were admitted into evidence.)

MR. DOLAN: Thank you, gentlemen.

You may proceed.

PETER J. LANZALOTTA,

called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY

MR. MOSSOS:

Q Good morning, Mr. Lanzalotta. Could you state your full name for the record, please.

A Peter J. Lanzalotta, L-a-n-z-a-l-o-t-t-a.

Q And what is your business address?

A 67 Royal Point Drive, Hilton Head Island South Carolina 29926.

Q And by whom are you employed?

A I work for myself Lanzalotta & Associates, LLC.

Q I have what's been marked as the direct testimony of Peter J. Lanzalotta marked for identification as AG Exhibit 1.0 with the accompanying Exhibit 1.1 up to and including 1.7. Did you prepare and direct the preparation of that testimony?

A Yes.

Q If you were asked the questions contained in your testimony today, would your answers be the same?

A Yes.

Q Is the information contained in your testimony and attached to exhibits and schedules true and correct to the best of your knowledge and belief?

A Yes.

MR. MOSSOS: Your Honor, we would move Mr. Lanzalotta's testimony and accompanying exhibits into evidence at this time, subject to cross.

JUDGE DOLAN: Any objection?

MR. RIPPIE: No.

MR. LANNON: No.

JUDGE DOLAN: AG Exhibit 1.0 along with AG Exhibit 1.1 through 1.7 will be admitted into the record.

(Whereupon, AG Exhibit No. 1.0 and AG Exhibits 1.1 through 1.7 were admitted into evidence.)

JUDGE DOLAN: Mr. Rippie, are you ready to proceed?

MR. RIPPIE: Yes, your Honor.

CROSS-EXAMINATION

BY

MR. RIPPIE:

Q Good morning, Mr. Lanzalotta.

A Good morning, Mr. Rippie.

Q How are you?

A I'm good.

Q I hope you had a decent flight, at least. We'll try to get you out of here on time.

First, general principles that we perhaps can achieve agreement on.

Would you agree with me that storm systems in North America are a common cause of damage to properly designed utility systems?

A Yes.

Q And storms, in fact, can cause unpreventable damage to utility facilities in a variety of ways, can they not?

A Yes, they can.

Q They can cause damage to equipment that is brand-new as well as equipment that has been in

service for a number of years; is that also correct?

A That is correct.

Q Would you agree that nationally weather is the single most common cause of damage to utility systems?

A I would be willing to say yes, subject to check.

Q Fair enough.

And the types of ways that storm systems can damage properly designed utility facilities include, for example, winds that exceed design for construction standards?

A Yes.

Q Lightning strikes, is that another example?

A Yes.

Q And in the case of lightning strikes, lighting damage can occur because of a direct strike on the facility or because of ground current flows; right?

A Yes.

Q And in particular, ground current flows could damage underground facilities as well as

overhead facilities; am I correct?

A That's correct. I can also envision other ways in which lightning can cause damage as well. It can hit a tree line, break a piece of it and have it come down.

Q Fair enough.

Since you mentioned it another way, storms can cause outages by causing contact between utility facilities and branches on other vegetation that remains intact; in other words, it blows a branch into the line?

A I'm not sure what you meant by the phrase "intact,"; but contact between trees and some wires, yes.

Q I was just trying to distinguish between a circumstance where the wind blows a branch into the line causing a contact flashover, for example, as oppose to a situation where the wind blows a tree down and it falls on the line and blows it down. Both of those can occur; correct?

A That's correct.

Q It can also cause damage through flooding;

right?

A Yes.

Q Would you also agree with me that weather conditions -- in particular, severe weather conditions -- can impede and delay restoration efforts after an interruption occurs?

A I agree.

Q It can also do that in a variety of ways, including by causing safety concerns for the crew by impeding access of the crew to the outage and/or by screwing the area with debris?

A Yes.

Q Would you agree that you do not recommend ComEd to take unreasonable or imprudent actions in order to reduce weather-related interruptions?

A Stated like that, I agree.

Q I thought you might.

And in determining what type of reliability performance ought to be expected of a system, you have recommended to the Commission that it consider both technical issues as well as practicality and cost, right; for example in the rate

case a couple months ago?

A I believe I did.

Q You still agree with that recommendation?

A Yes.

Q Now, am I correct based on the ways in which storm systems cause damage to utility facilities, that the type of storm that one might expect to cause unpreventable damage to a delivery system would be one that produced strong wind, high rates of lightning, high rain rates, lots of debris, and widespread damage to vegetation?

A Yes.

Q Are you aware of any storm system that has passed through ComEd's service territory in the summer that has caused more lightning strikes, higher rain rates, more widespread damage to vegetation and other infrastructure in the last 10 years than the August 23, 2007 summer storm?

A No.

Q You have reviewed the description of the August 23rd storm system in ComEd's petition and testimony; is that correct?

A Yes.

Q And am I also correct that you are aware of no data that contradicts in any way the description of the winds, lightning, and other weather characteristics of the August 23rd storm system as set forth in ComEd's verified petition in the testimony of Mr. Segneri?

A I do not.

Q And you have no other basis for questioning the severity of the storm as described by the petition and Mr. Segneri, do you?

A No.

Q You weren't here personally when it occurred?

A That's correct.

Q Now, on Lines 56 through 58 of your testimony you state -- and I'll try to quote it correctly -- please tell me if I didn't -- The outages that occurred when a major frontal weather system crossed the company's service territory on August 23 are obviously not independent events but are strongly interrelated in both cause and effect.

Did I get it right?

A Yes, you did.

Q By the "outages" you mean the roughly 4300 interruptions that are mentioned in the petition; is that right?

A Yes.

Q And by stating that those interruptions are strongly interrelated in cause, am I correct that you mean that they all resulted from that major frontal weather system of August 23rd; correct?

A Insofar as I am aware, yes.

Q In stating that those interruptions are interrelated, in effect, you simply mean that they resulted in various customers being out of service until they were restored?

A Pretty much, yes.

Q Is there any other way that they were strongly interrelated, in effect?

A Well, the fact that there were so many of them certainly had an effect insofar as service restoration time.

Q Now, do you agree with ComEd that there are

standards for the design delivery facilities of the type that were involved in the interruptions in this case?

A Yes.

Q And there were both design standards and construction standards; right?

A Yes.

Q Now, ComEd has literally hundreds of pages of construction standards; right?

A That's correct, they do.

Q And your testimony, as I recall, does not discuss the construction standards; am I correct?

A That's correct.

Q And there are design standards as well that are separate from instruction standards; right?

A Yes.

Q And you are aware of no accepted and applicable electric utility or engineering standard other than those cited and discussed in the testimony of Dr. Krishnasamy, Mr. Cress and Mr. Segneri, are you?

A That's what I said in response to your data

request to that effect, yes.

Q And principally the design standard applicable to, for example, the ability to withstand wind blowing is the NESC, National Electric Safety Code Standards; is that right?

A Yes, they address clearances and the like.

Q And they also address the degree of load strength that poles and crossarms are expected to withstand; correct?

A Yes.

Q Do you have a detailed familiarity with those standards?

A I've had occasion to refer to them on fairly frequent occasion.

Q Okay. Would you agree with me and stop me if I ask you a question that exceeds your familiarity with them or tell me it exceeds your familiarity. Those standards specify strengths based on the date on which the pole is installed; right?

A I believe so, yes.

Q Now, nothing in your testimony recommends that ComEd be required to install or operate a system

that exceeds NESC requirements in any way, does it?

A No, it does not.

Q You agree that the NESC does not have an age limit on the poles?

A I agree.

Q And there's not even a target age for a wood pole replacement in the NESC, is there?

A Not that I'm aware of.

Q The same is true for crossarms, right, no limit and no target?

A Yes.

Q And no standard, NESC or otherwise, requires an overhead distribution facility to be able to withstand an impact from a tree branch or a tree; right?

A There's nothing specifically stated. Although, I'm sure the intent is that a tree branch -- there are a lot of different kinds of branches. You would hope it would withstand some of those.

Q Nothing in the NESC requires it to withstand an impact of a tree branch or a tree whose

force impedes the force loading limits in the standard?

A That's correct.

Q Nothing in the NESC requires it to withstand a lightning strike?

A I agree with that.

Q Nothing in the NESC requires it to continue operating properly if it's subject to a flood; is that true?

A As far as I am aware.

Q Now, as I understand it, your opinion that crossarms have a life of 25 to 35 years is based not on any standard or study but on your, quote, personal experience, unquote; is that correct?

A Yes.

Q And your view that ComEd crossarms maybe, quote, brittle due to age is also based on your personal experience; is that right?

A It's based on my experience regarding crossarms in general, yes.

Q But you were unable to identify any articles, references, studies, or reports that

support your conclusions concerning the supposed brittleness of those crossarms installed on ComEd system; or, for that matter, that evaluate or measure the effects of aging of crossarms in terms of brittleness?

A Other than what I thought I addressed in my testimony itself, the data regarding age of components on ComEd's system indicates that median life of crossarms is -- or median age of crossarms on the system is less than that median age of wood distribution poles.

Q Putting aside the fact that you believe that the installed age gives rise to that inference, you weren't able to identify any third-party articles, references, studies, or reports that support your conclusion that crossarms become excessively aged or brittle after 25 to 35 years; right?

A No.

Q You did not physically inspect any of the locations where a ComEd distribution facility suffered damage during the August 23rd storm system,

did you?

A No.

Q You haven't physically inspected any ComEd distribution equipment that failed during the storm system; right?

A Right.

Q As I recall, you never made a request to do that, did you?

A I did not.

Q Did you physically inspect any equipment installed in the ComEd system at the same age in vintage in that which failed?

A No.

Q And, in fact, you have not physically inspected any ComEd distribution equipment that currently remains in service in connection with your testimony in this docket; isn't that correct?

A Yes.

Q Now, you identified with respect to -- strike that.

You identify in your testimony several ComEd reliability reports; am I correct?

A Yes.

Q And you reviewed those reports not only in connection with this case but also in connection with your testimony in ComEd's pending general rate case, Docket 07-0506; is that correct?

A Yes, it is.

Q Now, am I correct that all three of those reports conclude that the Commonwealth Edison system is performing reliably?

A Yes.

Q That fact was the principal conclusion of the first page of each of those reports; am I correct?

A I believe it is.

Q To your knowledge, has the Commerce Commission questioned or refused to accept any of those reports?

A Not to my knowledge.

Q Now, in the rate case when you evaluated those reports, am I correct that your testimony reached the conclusion -- and I quote -- There does not appear to be a pressing mandate to significantly

increase the company's historical reliability importance?

A I remember saying that.

Q Did you also testify to the effect that there was no apparent need for Commonwealth Edison to increase its spending in order to, quote, drive a shift in the company's system reliability?

A You said "drive a shift"?

Q Yeah, actually I think those were your words?

A Those were my words?

Q I'll show it to you?

A No, I'll accept it.

Q And all of that testimony that I just talked about was submitted after the August 23, 2007 storm, wasn't it?

A Yes.

Q Now, will you agree with me that you are not a specialist in wood material strength or aging?

A Yes.

Q Would you agree with me that you have, in fact, testified and opined on a huge variety of

subjects relating to electric -- and in some cases non-electric -- but mostly electric utilities in the course of your career?

A Yes.

Q You have not specialized in evaluating the failure of electric utility systems after storms or other events, have you?

A I've done other things as well.

Q Nonetheless, you have not specialized in that; right?

A I have a lot of experience in that.

Q Well, in response to data requests you identify some utility experience; right?

A I believe I identified utility experience in which I submitted testimony.

Q Well, the utility experience -- Okay. Fair enough.

You're not relying, then, as a basis for your qualifications on the 3 years you spent as an associate at DB & E (phonetic) or your brief work for the Connecticut Municipal back in the '80s; right?

A In part, my work with Baltimore Gas & Electric was very much oriented towards distribution operations. As part of that work, for example, we managed companies' response to storm situations. I was also on call when there was a public contact incident. I would have to go out with the lawyers, make sure we had the information to determine whether the facility in question were in compliance with the proper set of National Electric Safety Code requirements.

We would work closely with troubled departments -- not that they would make trouble, they were the ones that responded to trouble -- and even occasionally would go out with the trouble man.

Q In this case, though, we've established that you haven't had an opportunity to do any of those things with respect to any of the ComEd equipment; right? You haven't gone out and looked at it, you weren't with any ComEd crew ever, and you're not familiar with how ComEd actually operates its restoration program, are you?

A I would agree.

Q And your total utility experience consists -- that is, working for utilities in an engineering capacity -- consists of the three years at BGA as a, quote, associate engineer, end quote, when you first got out of school and a short period of time with the Connecticut Municipal whose total load, as I recall your prior testimony, was 15 megawatts?

A That was South Carolina Electric Works (phonetic) --

Q Correct.

A -- so that was in, I believe, hundreds of megawatts.

Q But you weren't an operating engineer for that outfit, right, you were primarily dealing with computerization issues and rate design and regulatory matters; true?

A Primarily. We had instance to work on some substation and subtransmission-type supply questions. But there wasn't any distribution-related work.

Q And of the 88 or 89 projects that you identified in the submission that you made to define

your experience, only eight you identified as relating in any way to the areas of material condition of electric distribution systems, evaluation of damage to electric distribution systems caused by weather events, design construction or maintenance standards applicable to distribution systems, or the restoration of distribution systems after an outage; is that correct?

A That is correct. But that doesn't represent the sum total of my experience in that area. For example --

Q Well, I'm just asking you about what you identified in your document. I'm not asking you to go off the document that you submitted.

A I gave you specifically what you asked for. You asked for testimony. A lot of my work in this area never resulted in a piece of testimony.

Q I wasn't referring to that. I was referring to the qualifications that you attached to your CV. Your CV lists after the textual description of your qualifications a whole list of assignments.

A Those are cases testified in.

Q You designed that CV; correct? I didn't ask you to make your CV that way; right?

A Fair enough.

Q Okay. And of those 89, 8 of them relate to those 4 areas?

A I believe that's what I identified.

Q They do, however, include a rather impressive list of other topics, and I'm going to zoom through them before I get into the rate case, and tell me if I've added any that you actually haven't testified about.

I'm going to start with some new ones: Transmission tariffs, market power, wholesale, market manipulations, utility mergers, electric magnetic fields, transmission line sighting, retail rate design, retail rate caps, service line extensions, performance-based rates, and designs of special renewable energy zones, those are all in the last decade; right?

A Yes -- well, the renewable energy zones testimony was virtually all transmission-related.

Q Okay. Fair enough. But those are all in

the last decade; right?

A Yes.

Q And if I take your whole list, we can add to that co-generators, small power producer rates, fuel inventories, fuel supply and acquisitions, bulk power purchases and sales, reserve margins, regional capacity planning, generation operations, generation unit failure, generation station planning, allocation of production costs among operating units, nuclear decommissioning, nuclear contract evaluation, rates of return, data security, financial reporting, and utility computer applications; right?

A I'm not sure how involved my work was on rates of return. In general, I would have to say, yes.

Q Now, 10 years ago -- actually, I believe it's 13 years ago you testified to this Commission that you were unable, in your words, to name a single area of the electric -- I'm sorry -- unable or you chose not to in your words name a single area of the electric utility industry in which you did not consider yourself qualified as an expert.

Is that still true?

A I'm sure there are areas today in which I'm not, but...

Q Can you think of one?

A As I sit here, I'm not going to try to generate a list.

Q You would agree with me, though, that there are engineers who actually do specialize in the analysis of failure of the distribution systems and the performance of wood poles and crossarms; right?

A Yes.

Q Now, I did notice in your resume that you identify several times that you have testified before this particular Commission; right?

A Yes.

Q And do you have your resume in front of you?

A Yes.

Q If you can refer to the item identifies as No. 35, that was a case in which you presented engineering testimony and proposed a design of a system to this Commission, is it not?

A A design alternative to what the company had proposed, yes.

Q Do you recall what conclusions the Commission reached about your work?

A I know they didn't accept my alternative design.

Q Do you recall whether the Commission found in its order that there were serious advocacy and reliability questions associated with your recommendation?

A I don't recall ever having seen the order.

Q You've never seen the order?

A I don't believe I have.

Q Okay. But -- you know what? It's an order of the Commission. So we'll do it that way.

You will verify that the particular order in question in No. 35 is ICC Docket 92-0221 reopened?

A I'm sorry. Come again.

Q Well, the common name for it was the Electric Junction Transmission Line Project; is that correct?

A It might have been. That's 15, 16 years ago.

Q It was Docket 92-0221; is that right?

A If that what it says, yes.

Q Now, on Pages 5 through 6 of your testimony -- one more question.

Is it also true that the Commission has never accepted one of your alternative design recommendations in any of the cases where you've made them -- this Commission?

A You mean in terms of these transmission line alternative cases?

Q Transmission or in one case high voltage distribution, yes.

A Not that I'm aware of.

Q Now, we'll go to Page 5 through 6, Lines 118 through 129 of your testimony. Those provisions of your testimony venture a view of how Section 16-125(e) of the Public Utilities Act should be interpreted at this time; is that essentially correct? I understand you're not offering a legal interpretation.

A Yes.

Q If you take a look at ComEd's Exhibit A, do you know what the largest single continuous power interruption suffered by customers was during the August 23rd storm, which interruption it was?

A No.

Q If you went through Exhibit A, you could figure it out by looking down the column that lists the number of customers until you found the one that had largest number of customers affected; correct?

MR. MOSSOS: Objection, your Honor. I think this calls for a legal interpretation. We still haven't determined how we're going to interpret a single continuous interruption, and he's asking the witness to make that legal determination based on how ComEd has been arguing.

MR. RIPPIE: First of all, I'm not. I'm asking the witness to use terms that he uses. I'm not telling him they have the same meanings in the statute. But Pages 5 through 6, Line 118 through 129 of his testimony ventures an opinion on just that subject. The last line of that question and answer

he quotes the statute -- I'm not asking for a legal opinion. I'm asking for the same basis that he had when the wrote the testimony.

JUDGE DOLAN: I'll overrule the objection.

BY MR. RIPPIE:

Q In order to figure out what the largest one is, what the largest interruption was, you read down the column that says "number of customers affected" until you found the one that had the larges number of customers affected; right?

A It's a little more complex than that. As I recall, sitting here -- now we're talking about Appendix A?

Q Yes.

A Okay. Each line in Appendix A, as I recall, is an outage segment. For example, if you have a pole come down and knock down the distribution feeder as it exits the substation, the entire feeder goes out, that entire feeder doesn't necessarily show up as one line on your Appendix A.

If one tap of that feeder was restored in a half-hour and another tap of that feeder was

restored in 40 minutes and another tap was restored in 60 minutes and another tap -- each one of those is going to show up as a separate line. So it's a little bit more complex than what you're trying to describe.

Q Fair enough.

With the caveat that you would have to correlate rows on that appendix, in your view, where those rows relate to a common piece of equipment, in this case a feeder, with that caveat, the process you would use is to generally go down the column that listed the number of customers affected; and making that summation where you've just explained you think you ought to make it, you would find the one that has the largest customer impact; right?

A It would tell me what particular segment.

Q And to determine the longest in time you would look down that -- the columns for the start time of the interruption and the end time of the interruption and determine its duration and figure out which one -- again, subject to your caveat about combining ones that affected the same feeder -- and

determine which one was the longest; right?

A My caveat was which ones are caused by common cause. But, yes.

Q Is it your view, Mr. Lanzalotta, that on August 23rd and August 24th there was one interruption in ComEd's service territory?

A No, it's not.

MR. RIPPIE: That's all I have. Thank you.

MR. LANNON: Just one minute, your Honor.

MR. DOLAN: Sure.

CROSS-EXAMINATION

BY

MR. FOSCO:

Q Good morning, Mr. Lanzalotta. My name is Carmen Fosco. I'm one of the attorneys representing Staff.

A Good morning.

Q Just a few questions.

As I understand your testimony, one of the issues you address is the impact of the age of certain equipment on the outages that occurred correct -- or the potential impact of the age of

certain equipment?

A Yes.

Q Have you formed an opinion as to whether the age actually, in fact, had any impact, had the age of any ComEd's equipment?

A I believe it to be highly likely given the type of storm we're talking about.

Q And on what is that opinion based?

A When you get a storm like this, high winds and all, in sections where -- especially on the distribution system -- where the vegetation is trimmed so as to retain a canopy, the electric wires is subjected to a virtual hail of objects coming out of this canopy, little branches, big branches, limbs, sometimes entire trees, while even a brand-new pole line with crossarms probably would have difficulty withstanding a hit from a big enough tree as it came down.

When you're in this type of situation of a whole range of different sized objects coming down, if your entire system is brand-new, it's going to be more resistive to a larger percent of these

objects than it would have the if the pole line and the crossarms were all 50 years old.

And so given the age and information I can see about crossarms on the system, I believe that age at least had a contributing factor.

Q The only evidence you rely on is certain evidence you've retained regarding what you consider to be the age of certain equipment and no direct evidence of any actual outages being involved or caused by the specific age of specific equipment? I mean, you don't have any evidence that ComEd experienced routing crossarms or anything like that, do you?

A No, I do not.

Q Other than your observation regarding age of equipment, you haven't offered any other testimony have you on what could or should have been provided to establish whether there was unpreventable weather damage that resulted in these outages?

A No.

Q Am I correct that the main focus of your testimony in terms of the aged equipment is with

respect to crossarms?

A As far as what I discussed in my testimony, yes.

Q Okay. And do you know how many customers interruptions are identified in Attachment A to ComEd's petition and reflected again in the response to a Staff data request provided in spreadsheet form that they've identified as involving crossarms?

A I think it's relatively few. I'm not sure of the number.

Q Under 6,000?

A I'd have to take -- accept it subject to check.

Q Would you accept subject to check that -- well, that there are 3 items that appear to be related to crossarms in Attachment A, one called just Crossarm another identified as Alley Arm and a third identified as Cross/Alley Arm?

A It's entirely possible. I wasn't confident in Appendix A in giving specific detailed and correct data on causes simply because in a situation like that it's just about an all-hands-on-deck type of

drill. And the company has anyone out in the field who is capable of helping. I don't think you're going to get the same consistency on determining outages that you would get on a normal day-to-day basis when the people that are doing that are the ones that do it every day.

Q Would you agree subject to check that those are the only 3 items identified as involving crossarms?

A Yes.

Q And would you also agree subject to check that the number of customer interruptions associated with those are 5,580 for crossarms, 415 customers for alley arms, and 311 customers for cross/alley arms?

A Yes, subject to check.

Q And you don't have any personal knowledge that any interruptions were caused by crossarms other than those identified by ComEd?

A No.

Q On Page 9 of your testimony you have some testimony about the spreadsheet provided by the company in response to Data Request OGC 1.01,

Attachment 1. And you testified that more than 40 percent of the almost 6800 outage segments reflected in Appendix A attributed to a problem with phase wires that required a fix other than removing a tree -- it says "of" -- I think you meant or replacing a fuse.

Do you see that?

A Yes.

Q Is what you mean by that is that in the restoration or remediation column of that chart the company didn't list for the ones you identified -- tree removal or replacing a fuse -- as the restoration, they identified something else?

A Yes.

Q Would you agree that the largest -- let me ask you this:

Are the ones that weren't identified as tree removal or a fuse replacement, would you agree that a significant number of those are labeled as temporary switching?

A I would be willing to take that, subject to check.

Q Would you explain to us what temporary switching is?

A It's essentially where you take someone out in order to effect repairs or to cut back and of the facilities that have been repaired.

Q Isn't it true that for ComEd that they're able to tie in one distribution circuit to another distribution circuit to restore service to customers?

A Yes, that's possible too.

Q And if they do that, that doesn't indicate that there's not tree damage or a fuse that needs replacing; is that true?

A Yes.

MR. FOSCO: No further questions. Thank you very much.

MR. MOSSOS: Can I have five minutes?

JUDGE DOLAN: Sure. Let's take five minutes.

(Whereupon, a brief recess was taken.)

REDIRECT-EXAMINATION

BY

MR. MOSSOS:

Q Mr. Lanzalotta, does the fact that you do not specialize in one area rid you from testifying in this case?

A Not that I'm aware of.

Q Mr. Rippie stated there are 3 reports you have looked at -- I believe there's the ComEd report? And he stated that the conclusion is that the ComEd system was operating properly.

Isn't it true that these reports are authored or commissioned by ComEd?

A I believe so, yes.

Q Mr. Rippie also offered a plethora of reasons showing how storms can cause damage to utility service. He stated high rates of lightning, high wind speeds, et cetera.

You stated that you accepted ComEd's general description of the weather system in its filing; is that correct?

A Yes.

Q And you did not do an independent investigation of those statements during the storm?

A No, I did not.

Q Isn't it true that ComEd generally described the storm system occurring August 23rd or 24, but does not go into detail? For instance, they do not state where the storm happened, a specific town or municipality, do they?

A No, they do not.

Q They did not state what time a storm passed through the town, do they?

A No.

Q Isn't it true that some outages occurred as many as 4 to 5 days after the storm system left?

A I'm aware of several, yes.

Q And you agreed when Mr. Rippie asked you that you storm systems in general could cause unpreventable weather damage; is that correct?

A Yes.

Q Can I direct your attention to ComEd Exhibit 1.02, Page 24.

JUDGE DOLAN: What page?

MR. MOSSOS: Page 24 of 49, the gives a graph on the right side.

BY MR. MOSSOS:

Q Is it correct that this lists several causes of the interruptions that were caused allegedly due to the August 23rd storm system?

A Yeah, we're looking at the table on the right-hand side.

Q Correct.

A That's what it does.

Q And does it list as a cause "intentional" on the left column?

A Yes, it does.

Q So is an intentional cause weather-related?

MR. RIPPIE: I object to the question. This is beyond the scope, and it's also about the seventh leading question. But the principal objection is I didn't ask about this. I asked about how storms can damage utility equipment in general, and I asked whether he had any problem with ComEd's description of the storm purpose.

MR. MOSSOS: He asked whether or not the storm

system caused unpreventable weather damage, and he did allude to some of the -- he did say he accepts what ComEd has given in his testimony, this is what ComEd had given, and just trying to show that there is not unpreventable weather damage.

MR. RIPPIE: This testimony is what is. This is going to the record with Mr. Segneri. And the Attorney General is welcome to cross-examine Mr. Segneri on this at length, but I did not ask about this document. I did not ask Mr. Lanzalotta about this aspect of the testimony. This is beyond the scope of my cross.

MR. MOSSOS: It is part of your file, and he did admit that he accepts as true everything that ComEd filed. And I only have 3 brief questions on this.

JUDGE DOLAN: I would overrule the objection.

BY MR. MOSSOS:

Q Is an intentional cause weather-related?

A Not as far as I'm aware, no.

Q And how many customers lost power due to that intentional cause?

A More than 31,000.

Q And is a public cause weather-related?

A Not typically. But it's a little more difficult to say in a heavy storm. Typically, public like this involves vehicles hitting facilities and the strictly not storm. Although, I guess the storm can be a contributing factor.

Q And these unknown causes that are listed, do you know if this is weather damage or weather-related?

A It's very difficult to say.

MR. MOSSOS: Thank you. No further questions.

JUDGE DOLAN: Any re-cross?

RECROSS-EXAMINATION

BY

MR. RIPPIE:

Q Mr. Lanzalotta, do you know what Commonwealth Edison's definition of "intentional" is?

A My interpretation of it is that --

Q I asked you a simple question. Do you know what Commonwealth Edison's definition of "intentional" is?

A Not specifically.

Q Do you know what Commonwealth Edison's definition of "public" is?

A Yes, I believe I do.

Q Okay. What is it?

A I believe it's actions of the -- by the public that take out the service. A typical example I gave was someone driving a car and hitting a pole.

Q So if somebody were to, say, slide on a slippery street and drive their car into a pole, that would be classified as public?

A Yes?

Q If someone was trying to remove a damaged tree from a yard and dropped it on a service line, that would be public?

A I believe, yes.

MR. RIPPIE: Thank you. That's all I have.

JUDGE DOLAN: Thank you.

Any recross?

RECROSS-EXAMINATION

BY

MR. FOSCO:

Q With respect to what you identify as -- refer to as "intentional," in your experience wouldn't there be some intentional interruption caused to repair damage from a storm?

A Yes. I believe I mentioned a scenario when you were crossing me.

Q And that would still be related to the storm, would it not?

A I believe it would.

MR. FOSCO: No further questions.

JUDGE DOLAN: All right. Thank you, sir.

THE WITNESS: Thank you.

JUDGE DOLAN: Okay. Staff?

MR. LANNON: Your Honor, with your permission Staff would call Mr. Ronald Linkenback?

JUDGE DOLAN: Okay.

RONALD LINKENBACK,

called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY

MR. LANNON:

Q Could you please state your name for the record, spelling your last name.

A Ronald Linkenback, L-i-n-k-e-n-b-a-c-k.

Q And by whom are you employed?

A By the Illinois Commerce Commission.

Q What's your position with the Illinois Commerce Commission?

A I'm an electrical engineer.

Q Do you have before you a document labeled ICC Staff Exhibit 1.0 entitled the Direct Testimony of Ronald Linkenback?

A Yes.

Q And does that consist of 17 pages of questions and answers?

A Yes, it does.

Q And there is no exhibit attached to ICC

Staff Exhibit 1.0 is there?

A There is not.

Q Do you also have a document in front of you labeled ICC Staff Exhibit 2.0 and entitled Cross Response Testimony of Ronald Linkenback?

A Correct.

Q And does that consist of five pages of questions and answers?

A Yes, it does.

Q With no exhibit attached to it?

A Correct.

Q Were both ICC Staff Exhibit 1.0 and ICC Staff Exhibit 2.0 prepared by you or under your direction?

A Yes, they were.

Q Are there any changes you would like to make to the document?

A No.

Q If I were to ask you the same questions contained in ICC Staff Exhibit 1.0 and ICC Staff Exhibit 2.0, would your answer be the same?

A Yes.

MR. LANNON: Your Honor, Staff would now submit Staff Exhibits 1.0 and 2.0 for admittance into the record, pending cross-examination of Mr. Linkenback.

JUDGE DOLAN: Any objections?

MR. RIPPIE: No.

JUDGE DOLAN: All right. ICC Staff Exhibit 1.0 and ICC Staff Exhibit 2.0 will be admitted into the record.

(Whereupon, ICC Staff Exhibit Nos. 1.0 and 2.0 were admitted into evidence.)

JUDGE DOLAN: All right. Mr. Mossos any questions.

MR. MOSSOS: We waived cross for this witness.

JUDGE DOLAN: Okay. Mr. Rippie?

MR. RIPPIE: I'll be very brief.

CROSS-EXAMINATION

BY

MR. RIPPIE:

Q Good morning, Mr. Linkenback.

A Good morning.

Q Could you please refer to Line 220 of

Exhibit 1. The question that begins there and the answers that occupies Page 43. Can you review that.

Now, as I understand that testimony, you were stating that beginning as of approximately 7:20 p.m., on the 23rd of August, a total of at least 30,000 ComEd customers were without service who had been without service for at least 4 hours; is that right?

A That's a conclusion I got, yes.

Q Okay. But prior to 7:20, at say 7:15, there were not a total of 30,000 customers that had been without service for at least 4 hours prior?

A Correct, based on the information in your Appendix A.

Q Now, the reason that at 7:20 there were more than 30,000 customers who had been without service for at least 4 hours and at 7:15 there were not is because 4 hours earlier, between 3:15 and 3:20 the storm would have been causing customers -- additional customers to be interrupted; right?

A The parties that were out for 4 hours were out at least before 3:20.

Q But the number jumped from 7:15 to 7:20. We, therefore, know that 4 hours earlier the storm caused enough interruptions to get that threshold of 30,000?

A Right.

Q And at the same time the storm was causing interruptions ComEd was restoring customers; right?

A I assume so, yes.

Q And the number of that changed from 7:15 to 7:20 then is a net number that reflects the increase in the number of customers that were interrupted 4 hours earlier minus the number of customers that ComEd restored in that 5-minute period; right?

A That is correct.

Q Now, in determining whether that customer -- whether that increment of customers was out for 4 hours, you looked at the beginning time and the ending time of the interruption affecting that particular customer or customers; right?

A Correct.

Q You didn't look at the -- treat the beginning time as being the first moment that any

customers was interrupted as a result of the storm; right?

A I looked at the beginning time that was reported in Appendix A.

Q And in the same respect you treated the restoration time as the time that that customer had its service restored, not the time when the last customer affected by the storm was restored; correct?

A Right.

Q Are you familiar with Part 411 of the Commission's regulations?

A Yes.

Q If I get too detailed, tell me; and I can provide you with a copy of the regulations. And if I exceed your understanding, please tell me. I think these are pretty direct questions.

For purpose of Part 411, ComEd and other utilities are required to separately tract and record each individual interruption caused by a storm system like this; right?

MR. LANNON: Your Honor, I'm going to object as beyond the scope of his testimony.

MR. RIPPIE: Well, Mr. Linkenback gives an opinion in his testimony about how the 30,000 customers should be measured. And the sole purposes of this line of questions that I'm beginning now -- which is I think five questions -- is to determine whether that is consistent with the way interruptions are measured under other provisions of the Commission's regulations. I think that's fair cross.

MR. LANNON: Mr. Linkenback doesn't reference Part --

MR. RIPPIE: That's right. He does not. We don't disagree about that. The purpose of my cross is to determine whether what he does say here is consistent with other provisions of the Commission's regulations. I think that's fair.

JUDGE DOLAN: I'll overrule the objection.

BY MR. RIPPIE:

Q Under Part 411 ComEd and other electric utilities are required to track separately and record each individual interruption caused by a storm system like this; is that right?

A That's correct.

Q And there are cause codes identified in the Appendix to the part that the utilities are required to use in order to classify those interruptions; is correct?

A That's correct.

Q And there is a category of cause codes for weather-related events, which are then broken down into subcauses such as lightning, wind, and tree contact?

A There is a cause coding. I can't tell you how many subsections there are.

Q I don't want to confuse you at all or in any way be unfair.

A Yeah, there is an interruption code description. I don't think the utilities are reported on the subcodes.

Q It defines the interruption in terms of various subcauses which are broken down and turned into lightning, wind, et cetera; is that correct?

A Correct.

Q Under Part 411 the utility records a start time and end time for those interruptions. Under

part 411, I believe .110, that much as your testimony here is the starting point and the ending point for a particular customer or group of customers' experiences; right?

A That's correct.

Q The start time is not the start time of the first interruption caused by the storm, and the end time is not the restore time of the last customer, it's the start and end time of the interruptions of any particular customer experiences?

A Correct.

Q Okay. Are you familiar with any rules, regulation, or industry standard under which ComEd would treat all of the outages caused by the August 23rd storm system as a single interruption?

MR. LANNON: Your Honor, I would assert another objection. I believe that calls for a legal conclusion.

MR. RIPPIE: I'll withdraw the question and revise it.

BY MR. RIPPIE:

Q I'm not asking you to interpret any

statute. I'm asking you to answer this question solely in terms of your experience as an engineer both in the regulatory environment and in the utility environment and how utilities report such things.

With that caveat, are you aware of any rule, regulation, or industry standard under which ComEd would treat all interruptions that resulted -- or the outages that resulted from August 23rd storm system as being a single interruption?

MR. LANNON: Your Honor, I'm going to object one more time. I don't think the record contains any basis that -- Mr. Linkenback hasn't testified to other rules, regulations here at the Commission. There is nothing in the record that would indicate he would be familiar with all those other rules and regulations.

MR. RIPPIE: Your Honor, he's perfectly able to answer that he doesn't know if that's the correct answer. I'm simply asking him if he's aware of them.

JUDGE DOLAN: I'll overrule.

THE WITNESS: I'm not aware of any.

BY MR. RIPPIE:

Q When was the last time you had -- for the sake of discussion, we'll use an example.

When was the last time you had an interruption at your house?

A It was last year, last summer.

Q You're not a ComEd customer, were you?

MR. LANNON: Last week for me.

MR. RIPPIE: That would be a different petition.

BY MR. RIPPIE:

Q How do you know when that interruption began, Mr. Linkenback?

A Well, if I'm home, I know because of firsthand. If I'm not home, I would only know when I do get home.

Q But regardless, the interruption begins when you lose service?

A Yes.

Q It ends when your utility restores service to you; correct?

A Correct.

Q It doesn't start or end when someone who

lives in Decatur is either taken out of service or restored, does it?

A No, it does not.

Q And that's because an interruption in Decatur is different than the interruption that affects your house; right?

A It doesn't affect my interruption; correct.

Q And that's true even if it's the same storm system that hit Decatur that hits your house; correct?

A Correct.

MR. RIPPIE: That's all the questions I have. Thank you.

JUDGE DOLAN: Any redirect?

MR. LANNON: No.

MR. RIPPIE: Your Honor, we can begin now. But my suggestion is actually why don't we get the formalities of entering the testimony into the record done now and break for lunch and start cross.

JUDGE DOLAN: Okay. That would be fine.

MR. RIPPIE: The company's next witness is Carl Segneri.

CARL L. SEGNERI,

called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY

MR. RIPPIE:

Q Mr. Segneri, spell your name for the court reporter.

A Carl, C-a-r-l, L, Segneri, S-e-g-n-e-r-i, Junior.

Q Mr. Segneri, by whom are you currently employed?

A Exelon Corporation.

Q And what is your current position?

A I'm the vice president of utility governess and quality assurance.

Q Mr. Segneri, did you cause direct and rebuttal testimony to be prepared by you or under your direction and control for the submission -- for submission to the Illinois Commerce Commission in this docket?

A Yes.

Q Are those document respectively marked Commonwealth Edison Exhibit 1.0, I gather, with the exhibits thereto in Commonwealth Edison 2.0 together with the attachments thereto?

A Yes.

Q Now, Mr. Segneri who is your employer and what was your title at the time that those documents were prepared?

A When these were prepared and submitted, I was working for Commonwealth Edison as vice president of quality assurance.

Q And when did you accept your new position?

A June of this year.

Q Other than the change in your positions, do you have any additions or corrections to make to ComEd Exhibit 1.0 or ComEd Exhibit 2.0 or their respective attachments?

A I would have one change. There was an omission where I referenced the testimony of Steven Cress and did not indicate Dr. Sammy Krishnasamy. I did not indicate his name, that they were both together.

Q I believe the on Page 2 of Exhibit 2.0, corrected, and the Footnote 2 on Page 4; is that correct?

A Yes.

Q Other than adding Dr. Krishnasamy's name to the description of that testimony, do you have any other additions or corrections to make to ComEd Exhibit 1 and ComEd Exhibit 2; correct?

A No, do I not.

Q If I were to ask you the same questions that appear in Commonwealth Edison Exhibit No. 1 and ComEd Exhibit No. 2 corrected with those caveats, would you give the same answers?

A Yes.

MR. RIPPIE: Your Honor, I have no other questions and offer into evidence ComEd Exhibit 1.0 together with Exhibits 1.01 and 1.02 and Commonwealth Edison Exhibit 2.0, corrected.

JUDGE DOLAN: Any objection.

MR. LANNON: None from staff.

MR. MOSSOS: Purpose no.

JUDGE DOLAN: ComEd Exhibit 1.0 along with

Exhibit 1.01 and 1.02 will be admitted into the record, and ComEd Exhibit 2.0 corrected will also be admitted into the record.

(Whereupon, ComEd Exhibit Nos. 1.0, 1.01, 1.02 and ComEd Exhibit 2.0 were admitted into evidence.)

MR. RIPPIE: Your Honor, I also note that Mr. Segneri is the verifier of Commonwealth Edison's verified petition. He adopts the factual statements made in that petition in his testimony. With the understanding that it is being moved into evidence solely for the factual statements made therein and not for any legal conclusions stated, I will also offer into evidence ComEd's verified petition.

JUDGE DOLAN: Any objections.

MR. MOSSOS: None.

MR. FOSCO: No.

JUDGE DOLAN: ComEd's verified petition will also be admitted into the record.

(Whereupon, ComEd's verified Petition was admitted into evidence.)

JUDGE DOLAN: On that note, are we going to then admitted Staff's verified response and AG's verified response into the record?

MR. RIPPIE: I'm not sure they were verified.

JUDGE DOLAN: It just says "response."

MR. FOSCO: We had the separate testimony on Mr. Linkenback.

MR. RIPPIE: That was our subsequent responses too, your Honor. It was only the initial petition.

JUDGE DOLAN: Okay. Never mind on that. Then ComEd verified petition will be admitted into the record.

And with that -- well since we have time how about we take a lunch till 12:30.

(Whereupon, a recess was taken.)

JUDGE DOLAN: I think we ended introducing all the exhibits into the record. And we're ready for cross-examination.

MR. FOSCO: Your Honor, Staff is ready to

proceed.

CROSS-EXAMINATION

BY

MR. FOSCO:

Q Good afternoon, Mr. Segneri. My name is Carmen Fosco. I'm one of the attorneys representing staff. I have a few questions for you.

Referring to Attachment A to the petition, you're familiar with that document; correct?

A Yes.

Q Okay. And there was also another version of that document produced in response to Staff Data Requisition OGC 1.01; correct?

A Yes.

Q And those documents are basically the same except for the updating of some trailing information?

A I think it had some columns, yes.

Q And one of the columns in both of those documents is referred to as an outage ID?

A Yes.

Q And in the attachment to the petition it

seems to me that where there is a common outage I.D. there's just blanks; is that correct?

A If you have it, it would probably be best for me to see it. I think I know what you're talking about, but I want to make sure.

Q So, for instance, if you just refer to Page 1 of 94 of that document, and if you look towards the bottom there's a couple of blanks under outage I.D. and start time.

A Okay. Yes.

Q And does that simply mean that wherever there's a blank that the information that appears above the blank applies -- it's just different segments of the same outage?

A Yes, that would be correct.

Q And then in the -- I believe in the -- although I don't have copies yet because it's pretty long.

But I believe in the response to the -- in the electronic version of the spreadsheet which was provided I think there were the same outage I.D. would appear more than once?

A Filled in the blank, yes.

Q Was there basically a formatting presentation for the attachment, basically the outage I.D. that was the same so that you could see it's one outage?

A I think because of this it's a direct extraction from -- this would have been a direct extraction from our outage system which would have just had the one, that's why you have the blank. The second one is someone that manually went in there and pulled the segment. I'm pretty sure that's how that happened.

Q And the approximately 4300 outages that you refer to in the petition, however that's defined it's counted by looking for separate outage IDs; is that correct?

A Yes.

Q So there are approximately 4300 separate outage IDs?

A That would be correct.

Q Can you give me a general overview -- you referred to that report coming from your interruption

system?

A The outage management system. That's the database that captures the outages.

Q And that's the same database that the company uses for reporting outages under the Commission's rules reporting individual outages?

A Yes.

Q And was any change made between how the company typically reports an outage and the outages that were reported with this petition?

A No. The outage reporting would be consistent with what we've been doing.

Q Okay. Can you describe the process that's used to gather that data. In other words, generally when outages happen, do people out in the field record some sort of information and transmit it? Could you just walk us through that process at a high level.

A Sure. We'll talk about the storm scenario --

Q That's fine.

A -- which is what we're talking about now.

So I'll just take -- a customer would call in or a number of customers would call in and say they're out of service, and our computer system is geographically mapped. So if it notes that these 3 customers reported an outage, our system lumps them together because they're electrically connected. And it said, Well, the next electric device up from them -- let's say the fuse -- there's a fuse out of service.

So the electronic data system would say there's a fuse outage in this location. The dispatcher who is looking at the screen would see that. He would send a crew or an individual trouble response person and say, We've got a device outage at this location. So that person would go out and assess what the condition is. So that response individual, who's generally a construction crew or an individual trouble responder -- they're all what we would consider overhead linemen-type persons -- they would assess what's going on, they would determine the cause basically, and they would report back to the dispatcher. And they would say, I have a tree

limb on the wire, I have a tree that blew in, it's going to take me about an hour to restore it.

So the dispatcher would then enter the cause, fill in the cause code --

Q If I can stop you there?

A Sure.

Q Is the cause code the equipment involved?

A I believe there's different entries. There's a cause code entry, and there's equipment affected, that series of information that that field person would translate to the dispatcher.

Q And to back up a little bit, you indicated that ComEd would receive notice of an outage when one or more customers called in?

A Correct.

Q Do you use the call-in time as the start time for the outage?

A Yes?

Q It may have been slightly before, but that's the best time you have to know -- that's when you became aware of the outage, the company?

A That's correct. There's generally two

ways. It can either be a customer call; or if it's an outage that affects an entire circuit, which would be the circuit breaker at a substation, then we don't need a customer call because our computer systems know that that's out, the Supervisory Control And Data Acquisition, SCADA is the acronym.

Q Thank you.

Okay. And then I think we stopped in with them identifying the cause of the outage. Then let's the next step is they proceed to repair the interruption?

A That's correct.

Q Then what happens when that's completed?

A They'll report back to the dispatcher that it's completed. The dispatcher then will enter the time of restoration, whatever the other column entry -- what was done. I replaced a fuse. I put up a wire. They would note whatever the repair entailed. And then, in general, our process then would be we initiated an automated call back to any customers that called us to ensure that they were back in service. So that's how the whole process

works.

Q And then that's when the restore time gets recorded?

A When the dispatcher gets that notification from the field, then they would say yes they restored it at whatever time.

Q And in Attachment A there was not a cause field provided. Were all of the causes for what's in Attachment A causes that fall under the weather category?

A No, I don't think every cause independent -- because during that storm there were more than weather. There was tree, there was public damages, as we saw before.

Q So it did not necessarily reflect the explicit weather codes, but did every outage relate to the storm in some way?

A You're asking me to speculate for every one of the 4300. The great majority of them were all tied into different events from the storm, yes.

Q Okay. And under the Restoration Remediation column of Exhibit A it lists specific

line items. Are those complete listings of everything that was repaired, like if it says "replaced fuse," would there potentially be other -- is that reflective of everything that was done?

A In that particular column it wouldn't necessarily be all inclusive, it would be whatever the significant --

Q Would it be the last big event that restored power?

A It would be the dominating -- the most contributing repair that you did. So, in other words, I think if you say if I had a wire -- you've got a crossarm and there's an insulator that holds up the wire and maybe the insulator was broken and I had to replace the wire in the insulator, it might only say, I put up the wire. It wouldn't give the details of the insulator, as an example. I think that's what you're asking.

Q For instance, if there was one that said Phase wire all voltages was the equipment involved and then resetting a circuit breaker and substation was the remediation step, there may have been other

steps involved such as -- or in that case no?

A Generally not. I wouldn't think so because particular, as we noted, how we take a larger, say, outage and break it into restoration pieces, the restoration pieces are usually pretty discrete. So, in other words, I replace the fuse and got this section back up. I don't know if that answers your question.

MR. FOSCO: Your Honor, may we present an exhibit?

JUDGE DOLAN: Sure.

BY MR. FOSCO:

Q I've shown you what's been marked as ICC Staff Cross-Exhibit 1. I will represent to you that this is a listing of the equipment involved codes and the related number of customers interrupted for each code based on the response to ICC Staff Data Request OGC 1.01. And the left column is just a number showing that there were 55 different codes entered, or words. And the next column is what each of those codes or descriptions were. The next column is the number of customers, and the next column is the

percentage of the total customers interrupted.

And then on the right column it sort of segregated the top seven codes which all amounted to more than 1 percent of the customers interrupted and that was less than 1 percent of the customers interrupted.

Can you accept, subject to check, that this document accurately reflects the codes and the number of customers interrupted in response to Staff Data OGC 1.01, which is the same as Attachment A to the petition?

A Yeah, subject to verification, it does look like what would be that kind information. Yes.

Q Okay. And we see that the number one cause of outages was phase wire all voltages. If you could actually go through top seven and describe for us what those are or what they would generally encompass.

A Some of them are relatively self-explanatory. Phase wire would be the wire itself between poles. So you've got poles and wires between the poles. So the repair would be to either

replace the section of wire or re-splice two pieces of wire together that had fallen down.

Q So it would have been some piece of wire that was damaged in some way?

A Correct. This gives you the equipment involved, not necessarily why it was damaged.

Q So it could be winds, it could be a tree?

A It could be lightning, it could be tree, it could be a car hitting a pole, it could be all of those things. So that's phase wire.

Is that okay?

Q Sure.

A And the second one is the substation breaker. So that would be very comparable to your circuit breaker in your distribution panel at home. At our substation, it's a larger circuit breaker that is the opening and closing device that energizes what we would call an entire feeder. The whole pole line is connected to a circuit breaker. So if the main trunk of that line was damaged, the circuit breaker would be the operating device that would open and interrupt that circuit.

Q So an event that might trick the circuit breaker would be a short that occurs from a broken line or even a lightning strike?

A All of the above, yes.

Q And other items as well?

A Yes.

And then --

Q Would a substation breaker normally indicate some kind of fault on the main line as opposed to a branch or could it be both?

A Generally, the main line. The next one we'll describe why that's the case.

So a feeder -- imagine it's a pole line that goes out to the neighborhood, and then it has to go into backyards and feed individual homes. So in order to be more reliable you've got the main trunk and then there's fingers that come off taps that go into different streets or different neighborhoods. And those individual --

MR. RIPPIE: If I may, I notice you're using your hands. We have a pad if you want to draw --

MR. LINKENBACK: Am I descriptive enough?

JUDGE DOLAN: I'm okay.

THE WITNESS: So these branches are protected with a fuse. And the reason for that is if there is damage or a tree down that tap you want to open the fuse and then you would only impact the customers on that tap. And the remaining feeder -- the rest of the main line would stay in service.

So the fuse is a device that all utilities use to break up the feeder. It's downstream device to sectionalize, if you will, a larger feeder.

BY MR. FOSCO:

Q And it's a tap off of the main line so that the rest of the main line would stay energized --

A That's correct.

Q -- if it was to become open?

A Right. That's correct.

Q Okay. So when we see equipment involved as fuse, we know for 34 roughly 35,000 of the customers that experienced interruption it was because of some event on a tap off of the main line?

A That's correct.

Q And then the next one, I guess, is cable. Does that refer to underground wire?

A Yes.

So it's the underground wire, and that can be on a main line or it can be on a tap beyond a fuse.

Q What sorts of things caused damage to underground cable during a storm? What kind of damage did that they experience?

A Generally -- multiple things, but generally two main ones, I would say: lightning damage can traverse either through the ground and hit an overhead system and then reach its low point in an underground cable and damage the cable or heavy flooding or heaving movement of the cable because a lot of water or moisture. Those would be the two main reasons that you would have cables failing during a storm.

Q Okay. A pole, I think that's self-explanatory, the pole that broke or --

A Right.

Q -- no longer working?

A Correct.

And then a switch, a load break, that's just a type of device that we would have. So to go back to the fuse discussion where you have a tap, some of our taps do not have necessarily a fuse; but there is a disconnect switch. It's an isolating switch that an operator can open so that you can isolate. The "load break" means when there's current on it or when it's energized, I have the ability to open it. And that's generally for operating purposes.

So what that indicates is during the storm there were a number of those devices that were damaged and had to be replaced.

Q Okay. They caused an open circuit condition?

A Right. It would be very analogous to the fuse. I think that's the best way to describe it.

Q Okay. And the recloser line, is that just a different piece of equipment similar to the switch load break.

A It is, except those -- it's comparable.

Realize that a reliable system, you have this long feeder and the more protection devices you could put in it to isolate a problem the less customers.

Q The less customers affected?

A The less customers affected.

So the reclosers is actually a circuit breaker that's in the middle of the feeder that opens and closes the main line. So, in other words, I could maybe break a feeder in half. So if the problem's at the back half, the recloser would open and all of the customers on the front end between the substation and the recloser would stay in service. So this recloser is a pole-mounted device.

Q There were reliable devices that allows you to keep half a line?

A Yes.

Q But they can also be damaged during a storage?

A Absolutely.

Q And then they can cause an outage when they're directly impacted by a storm?

A Yes.

Q Of the seven items that we've discussed which accounted for roughly 91, 92 percent of the customers interrupted, are those consistent with damage from a storm?

A Those are very common items. Those are generally the most common items in a storm.

Q Are there any in the rest of the list that are not typical of the storm? There's a -- I'm sorry. It's not here. It's in my next list.

Are there any in there that would not normally be associated with a storm?

A No. In particularly, in the numbers -- some of those numbers are so small. Our system has 5,000 circuits in it. So there's a lot of equipment out there. So this is not abnormal to have these kind of equipment impacted.

Q Mr. Segneri, I've now shown you a document that's been marked for identification as ICC Staff Cross-Exhibit 2. And I will represent to you this is very similar to the last exhibit, only it is based upon the restoration remediation column.

Would you accept, subject -- it's the

same thing with a listing of the number, the code description, the number of customers interrupted, and the relative percentages. Can you accept that, subject to check?

A Yes, I can accept it.

Q Okay. And I follow the same convention -- if an item affected more than 1 percent of the customers that were interrupted, I put just a demarcation there so we can see.

And, as you can see, there's 11 codes for restoration remediation. And I'm wondering if you could, again, kind of generally go through what those entail in the context of a storm?

A So I'll take it one at a time. Repaired would be that I did not have to replace a piece of equipment. That would be like a wire that got hit by lightning and fell down. I'm able to put up and splice it together. I'm repairing the equipment. So the equipment isn't damage so severely that they can't just repair it on site and put it back in service. So that's what repair would be.

Temporary switching that was alluded

to. I can expand on that a little bit. When you're in a storm there's an awful lot of damage; right? And my goal in the early going is to restore as many customers as quickly as possible. So we have enough redundancy in our system so there would be a circuit and another circuit that's nearby.

If I have damage on the front half this circuit, what I can do is isolate it and close one of those load break switches and tie to an adjacent feeder. So that is a real common and probably one of the -- as you can see, it's No. 2 -- that's one of the most common repairs that I do for restoration.

Q What process would ComEd go through to decide whether it's going to repair a particular type of damage versus we're going to make the decision to tie to another circuit to restore service to some or all customers?

A It could be done in a couple ways: One, is the individual trouble response person on site talking with the dispatcher makes that determination. He'll look at it and say, I can repair this broken

pole in 2 hours or I can -- I see on the map there's a switch down there I can get it in 20 minutes. I'm one of the people that's an emergency response director who leads the restoration effort.

In the early part of the storm we'll declare a restoration philosophy, and we call it, We are in the cut-and-run phase, which means I cut everything I can in the clear and switch and go to the next, that way I get a lot more customers restored faster. So that's how that's determined.

Q Is that the basic criteria, the speed and number of customers that can be restored?

A That's the main objective early on, yes.

Q Does it indicate anything about what sort of damage there is? I mean, there could still be phase wire damage...?

A Oh, absolutely. So if you look -- that's why you have those multiple lines in a given outage. So it will say, I did switching -- temporary switching, and I restored 80 percent of the customers. You would still see in that outage ticket, Phase wire down, pole down, and then give a

location.

So then as you get farther into the event, the dispatcher would look and say, I've still got 30 customers out. So he knows -- he's got the intelligence in the ticket that he knows I have to bring a pole or I have to bring wire or something like that.

I'll keep going down.

Q Sure.

A Enclose the substation breaker. So, in other words, in order to restore the customers I did is enclose the breaker. That is not uncommon, particularly when we have 50,000 strokes of lightning. So you can have a very temporary event where a lightning hit a line, the circuit breaker opened, but there really isn't any other residual damage.

So the troubleman would patrol the line; and he doesn't see anything. So the dispatcher closes the circuit breaker back in, and all the customer are restored.

Q So when we see that code restoration it's

likely that's all that was needed to restore services to those customers?

A Yeah. Obviously, there's exceptions, but there would be the predominant case, yes.

A tree removed I think is pretty obvious. You had a tree leaning into a wire and you removed it, and I was able to restore the customers after I removed the tree.

Replaced fuse. Lightning hit a tap section and it blew the fuse, and I just have to replace the fuse, as opposed to a tree hit the section and the wire came down and it blew the fuse, the restoration remediation is really replace wire. In this case, there was no real damage other than the fuse blew. So I just had to replace the fuse.

Q Is 5 the same as 9, own they're just different words, close fuse?

A Yes -- oh, well, in some cases I guess you had the -- I guess that's the terminology where the fuse had just opened and it wasn't damaged. But you have to take the fuse link out and put a new fuse link in versus just closing the fuse. There's

probably not a lot of distinction between those two to tell you the truth.

Q Okay. 6 is...?

A Replace overhead material, and that would be whether I had to replace a crossarm or a section of wire.

Q Okay. And that's different from one in that you weren't able to repair it, you had to replace it actually?

A Put a new piece of equipment in, yes.

Close the recloser line, that's comparable to the substation breaker. The recloser open, it's probably an intermittent issue, a very temporary issue. And then I was able to close the recloser.

Close a switch or disconnect. The same kind of thing. I have an adjacent disconnect that ties me to another source and I close it, and that's what restored the customers.

Closed the circuit switcher. A circuit switcher for our purposes is -- they're not much different than a recloser. It's just another

type of interrupting device.

And then disconnect overhead material --

Q Is that where lightning arrester is damaged and maybe you just bypass it or something like that?

A Exactly the kind of thing it would be. It's a damaged piece of equipment that either doesn't affect any customers or it's a couple customers. So I can just get them out of the way and then I can restore the service.

Q Okay. Actually, just to back up because I believe you and I have both been using the terms "open" and "closed," can you explain for the record -- I think I understand what it means, that when a circuit's open electricity can't flow -- but can you explain how that term works.

A I think you just did. If I open a device, then I'm interrupting the flow of electricity. Therefore --

Q It's sort of counter-intuitive. Usually when something is open we think you can go through.

A Right. It's the opposite of water with a

valve. You open a valve to let the water flow. You close a valve to shut it off. And the electricity is the opposite.

Q When the circuit's open, the electricity is not flowing; and when it's closed, the electricity is?

A Correct.

Q The same question I had for the equipment involved. Are these codes for restoration remediation in items 1 through 11 on this list? Are those all consistent with restorations that happen in a storm?

A Very.

Q Is there anything in the rest of the list that would not typically be associated with a storm and may be other that are counted for 25,000 customer outages? And I might bring your attention to -- maybe it's just a strange code, but it's install wild life protection.

A What number is that?

Q 36. Maybe you can give up those 3.

A In their restoration they might have found

damage -- that the wildlife protection was damaged, so they put a new one on.

Q Was there some other damage maybe likely associated with that?

A Possibly. With the 3 out of 4,000 I don't know that that really amounts to much. It does look like a little misplaced, but you can see how that might have happened.

Q Okay. Other than that, are there any other type --

A The others were consistent.

Q Okay. How does ComEd design or determine a different outage I.D. to a particular outage? I see a few things. It seems it's based on a start time. In other words, they have to be on the same circuit and the same start time? Is that at least two of the criteria?

A There's multiple criteria. There would be multiple criteria. The two you mentioned are certainly leading causes that in the same area electrically connected. But even on a given feeder that I've talked about where you could have many

taps, you know, multiple fuse taps off of the main line, if one feeder has 3 different taps damaged, so 3 different fuses blew -- this tap was damaged and the fuse blew and down the street another fuse blew -- those would be separate items with separate outages. Because you would -- they're really based on proximity, when they happened, what you would need to do to restore. They could be from different causes.

So they're really distinct events that just happen to be generally close to each other, but they're separate.

Q Mr. Segneri, on the Commission's Web site are copies of ComEd's self-assessment reports -- of course, there's not a cover page. I couldn't find a cover page for some reason. And this is portions of the reliability self-assessment report for 2006. And I included a table of contents, the introduction section and part of Part 2.

And do you recognize the portions of the document?

A Yes, I've seen these document. Yes.

Q I'd like you to refer -- actually, my questions all or mostly relate to the very last page of Part 2. And this refers to interruptions and power fluctuations, and it refers to how the company keeps records.

Is this referring to the same outage recording system that we've been discussing in general here this afternoon?

A Yes, it would be the same.

Q Okay. This also indicates that -- I think this explains, if you will, how single outages are segmented because it indicates on the paragraph on the right-hand side -- well, it explains that the starting period for the outages when ComEd was notified about -- or became aware of the outages which we already discussed. And it says, All customers are affected by interruptions that were restored by the same restoration effort at the same time -- one duration is shown for the interruption. And then it says in case in which customers affected by interruption were restored to a multiple restoration efforts the duration of each restoration

effort is shown along with the numbers of customers restored by each such effort?

A Yes.

Q And that is what we see in Attachment A and the DR response; correct?

A Yes.

Q It'll have the same outage I.D. but will have different restore time.

A Yes.

Q And then it says, In addition where interruption affected more than one ward or town, information on duration, is clearly divided by those wards or towns. So I believe if we look at Attachment A, we'll see that even though it might have the same restoration time, reported a separate line for each ward or town affected.

Does that sound correct?

A I'm not sure if I understood the question.

Q Right. If I understand the sentence here that says, Where and interruption affected more than one ward or town, information on durations is clearly divided by those wards or towns.

And what I understand that means -- if we look at Attachment A, we'll see a single outage I.D. We might even see the same restoration time -- the same start -- but we'll have different lines because you'll isolate the restorations that were in a particular town?

A I don't think the outage line would be split up like that, but inside the data. In other words -- if I think I'm understanding your question -- if the given outage was restored in two separate steps, Step 1 restore all the customers, half of the customers were in Ward 19 and half were in Ward 20, you wouldn't necessarily see that in that outage line, but as you dug into the individual customer data you would find it.

Q Can I give you an example?

A Yeah.

Q Do you have Attachment A to the petition in front of you still?

A Yes.

Q Can you find the outage I.D. 689625. It's got a start time of 8:23:07 at 1506. The list is

ranged by outage start times. So...

MR. RIPPIE: If you don't mind, we can try and search an electronic version and show it to him on the screen.

MR. FOSCO: That's fine.

THE WITNESS: Okay. I can read that.

BY MR. FOSCO:

Q And if you are able to follow the interruptions, there's -- I'm sorry. I don't have the page in Appendix A. You'll see that it's got the same -- a number of interruptions have the same start and end time, but there are different segments on this circuit. But for each restoration time there's is towns like Streator, Dwight, Pontiac. It is breaking it up by town.

A Yeah. I didn't see it that way before the way it's depicted. Yes, because it looks like the same outage was restored at the same time. And we just put a bunch of different lines. It looks like the distinction is town.

Q It does it by town and then by restoration times because --

A Yes.

Q -- apparently you restored different segments of the circuit?

A Correct.

Q And that's consistent with the document we were just looking at?

A It is.

Q It seems to me that that explained what I was saying.

And you agree?

A Yes, I agree.

Q There is a -- I had a reference, but I don't have it right now. There's a reference in Part 411 to what constitutes an interruption.

Are you familiar with that?

A Yes.

Q And I don't have the definition in front of me, but I believe it refers to involving a distinct piece of equipment to relate those pieces if equipment?

A Connected, interconnected. I can't remember the exact words.

Q Is that the definition that's used to define individual outages as it is in the Attachment A?

A If your question is, is it defined as a distinct outage in that time that it occurs and a continuous piece of equipment -- I'll see if I can find it.

Q Why don't I read the definition since your counsel was so helpful to provide a copy of the rule.

A What page are you on?

Q It's the definition section.

A The term interruption.

Q It says, Interruption or outage, except as used in Section 411.210, 411.220, means the failure or operation of a single component or simultaneous failure or operation of physical and directly connected components of a jurisdictional entity's transmission or distribution system that results in electric service to one or more of its customers being lost or being provided at less than 50 percent of standard voltage for a period longer than 1 minute in duration and require human intervention by the

jurisdictional entity to restore electric service.

A Yes.

Q Is that the definition that's been used to categorize separate outages in Attachment A to the petition?

A Yes. I would say that and common sense also.

Q But if I wanted to understand how ComEd came up with 43 separate outages, it's by applying that definition; correct?

A Basically.

Q I mean, there are individual facts that we could look at?

A Sure. This definition is consistent with how we would categorize and quantify different outages, yes.

Q Would you agree, Mr. Segneri, that any outage that affects more than one customer affects different customers?

A I want to make sure I understand. Repeat that, please.

Q Does any outage that affects two or more

customers affect different customers as that terms is used in your petition? I mean, there's a reference in the petition in several places to outages affecting different customers.

And my question is, would you agree that any outage that affects two or more customers affects different customers? That's sort of the definition, isn't it?

A There' different contexts for the word "different." So let's go back to what we were talking about before, an individual interruption, a fuse section or a tap section that might have 10 customers out of service, yes, those are 10 different customers. But that being different than a whole other fuse section, that's a different definition of different.

Q Would it be fair to say that it's not so much that they were different customer but customers that had different causes of their outage? They're all different customers, but you're sort of categorizing them by the cause of the outage or the particular equipment that caused the outage?

A So said that way -- said the way you just asked the question, a tree that comes down that affects 6 customers, I wouldn't say that it's 6 different customers it's an outage that affects 6 customers. That's one event. We go restore it. When we do the restoration, all 6 of those customers are restored.

Q Okay. And I was sort of troubled because to me they were all different customers. And I was having trouble understanding that statement.

I mean, you would agree that anytime there's two or more it's different customers, but you're using that in a slightly different way?

A Yeah. It depend on -- now, at the end of the year when we're reporting how many different customers got an outage, those 6 -- those 6 different customers that experienced an outage, but they happened to experience an outage due to the same event.

Q And they could be counted again if they had a different outage; right?

A At a different time, yes. Sure.

Q Do you use the terms "outage" and "interruption" synonymously? Are those the same? Is there any difference between an outage and an interruption?

A In general, I think that's an interchangable term, yes.

Q You may have answered this by covering other topics, but how did you determine that the outage in Appendix A were storm-related? Is it what we discussed earlier in terms of the causes and restoration meanings?

A Primarily because of the causes and what was found on the restoration and the times that they happened that were consistent with the weather front that came through. Location, time, and causes would be the basis for the conclusion that they're storm-related.

Q Anything else that you can think of?

A Nothing I can think of offhand.

Q If a field rep went into the field at the time of the storm and saw, for instance -- I'm making this up. Let's say a transformer is leaking oil and

you can determine that that means that it wasn't hit by lightning or something, would he report that as non-storm related even though it happens at the same time? Does it happen the service linemen will occasionally come across particular outages that they say, Well, this really wasn't caused by the storm?

A I mean, you're fabricating an event. That could happen at the same time that I'm in a storm window. So the outages that occur in that time window we don't really just say that's a storm, that's not a storm. They're just aggregated as total.

I mean, on the grand scheme if there were scenarios like you described, I mean their numbers would be so small compared to this 600,000 customers. It really wouldn't count. But it was an outage that a customer experienced, so it does get captured. I mean, it absolutely does get captured in our system. So it would be noted as an outage and the duration and all the other data, what we had to do to restore it.

Q Okay. Do you know the highest number of

customers that were affected by a single interruption as ComEd has defined it during the storm?

A I don't know the exact number. It would probably be 2,000/3,000. I mean it would be that range. I'd have to pore through Appendix A.

Q Would you accept, subject to check, that it's 6,386 for outage I.D. 689625?

A I will accept because we had a substation bus outage or two in a couple substations. That would be consistent with that kind of event.

Q And are there distribution circuits that have that many customers?

A There are 34,000 volt lines that do have that many customers on them, yes.

Q Okay. What's the largest distribution circuit in terms of number of customers in a ComEd system?

A I wouldn't know the exact number. It would be around 9 or 10,000 and that's on 34,000 volt line. It would be in that range.

Q And, to your knowledge, are there any distribution circuits as opposed to transmission

circuits that serve 30,000 or more people?

A On an individual distribution circuit?

Q Yes.

A No, there are none.

MR. RIPPIE: Can I ask you a question? Do you mean distribution and transmission in the colloquial sense, or are you referring to how they are actually functionalized (sic).

MR. FOSCO: I'm referring to how they're actually functionalized; meaning --

BY MR. FOSCO:

Q Well, let's go over that a little bit.

Can you explain the difference between a distribution and a transmission circuit, if "circuit" is the right word. I'm not sure?

A Well, I guess by the way you're asking it -- let's do a little bit of a primer on the system, if that's okay?

Q Sure.

A A high vol- -- let's start with a high voltage line, which could be referred to as a transmission line. Let's just talk about a 66,000

volt or 138,000 volt line which could have connected to it multiple substations, and then out of each of those substations there are, you know 2 or 3, 30 individual feeders. So a 12,000 volt feeder or 34,000 volt line. So those individual feeders that customers are directly connected to those lines --

Q And that's what I was referring to as a distribution center, yeah.

A Right. Those you would have 6,000 up to maybe 10,000 customers connected. But that high voltage line --

Q Coming into a substation --

A -- that comes into the substation you could say that serves all of those customers. So an individual high voltage line can easily serve more than 30,000 customers.

Q That's the distinction I was trying to make.

A Yes. So it's not directly connected. But an outage on that high voltage line would impact possibly multiple substations which could be 30,000, 50,000 customers. That is possible.

Q Okay. And just so the record is clear, am I correct that circuits that directly connect the transformers that connect to customers' premises those tend to be kind of a system 4 kilovolt, 12 kilovolt and 34 kilovolt and 69 sometimes?

A Rarely 69. 69, there would be customers directly connected, but a very small number.

Q And then there would then be also 138 KV lines and then maybe two voltages above that for both power distributions of 345 and 500 kilovolt?

A 765 --

Q 765. Okay. And with the distinction that we just made, if any piece of equipment on a distribution circuit the 34 kilovolt and below is damaged, it is basically physically impossible for that to affect 30,000 or more customers by that piece of equipment being damaged by itself; correct?

A By the individual 34 KV line that component -- I don't know the scenario where 30,000 customers, but a component in a substation which feeds 30,000 customers definitely a single failure or single outage could affect 30,000 or more customers.

So there are definitely elements within our system that a single failure or a single outage would impact more than 30,000 customers.

Q Do you have Mr. Lanzalotta's testimony available to you?

A I think so, yes.

Q He attached as AG Exhibit 1.5 the company's response to Data Request AG 2.05.

A It's AG 1.5.

Q It's a two-page document.

A Okay. I found it.

Q And third data request, did you help prepare this data request response or were you possible for overseeing it?

A Let me look at it and see if I did it.

I know I reviewed this, yes.

Q And this data request basically asked the company to identify components of ComEd's transmission or distribution facilities whose failure or malfunction could cause an outage to more than 30,000 customers; correct?

A Yes.

Q And it seems that this is a highly technical response; but when I read this it's saying -- and I think it's consistent with the question and answers that you and I just engage in, that basically this identifies that there were -- at least in the areas affected by the storm there were 3 substations that were served by two-line transmission lines where they could if one piece or component of those was damaged could have taken out service to the substation which would have -- or could affect 30,000 or more customers?

MR. RIPPIE: Again, I just need clarification. You're using the phrase "transmission line". He has not testified to -- do you mean 138 KV lines?

MR. FOSCO: Yes.

THE WITNESS: We can use that high voltage distribution line.

BY MR. FOSCO:

Q And it's a line coming into the substation; correct?

A Oh, yes.

Q And in this answer we're talking about lines coming into substations being damaged, and then damage to those facilities could affect 30,000 or more customers; correct?

A That would be correct.

Q And typically -- and the reason you only identified 3 substations is because typically there's redundancy into a substation where if one line were damaged, the other line or lines could pick up the load; correct?

A Yes, I believe the answer is we've -- we designed redundancy into the system so that we don't put ourselves in that situation.

Q And there's a few substations that have not yet reached 30,000?

A And we don't have that redundancy. That's correct.

Q I understand that it's ComEd's position that there were separate interruptions associated with the August 23rd storm front, but do you agree with Mr. Linkenback's testimony that there were 4-hour windows where more than 30,000 customers were

interrupted started at around 7:20 p.m., on August 23rd, and continuing to roughly 2:00 p.m., on August 26th?

A I agree that there were increments with more than 30,000 customers out, yes, due to separate incidents.

Q And I think this is obvious from a question we asked earlier; but in ComEd's view there can be a single interruption that affects more than one municipality?

A Oh, yes, very easily.

MR. FOSCO: Your Honor, the last item I would deal with is I have a copy of the company's response to Staff's Data Request OGC 1.01, which is the updated outages. And we're passing out copies. If they don't have any questions about it, I would simply be moving for its admission.

MR. RIPPIE: No objection.

MR. FOSCO: Your Honor, that concludes our questioning. And I would move for the admission of ICC staff Cross-Exhibits 1 through 4.

JUDGE DOLAN: Any objection?

(No response.)

JUDGE DOLAN: ICC Staff Cross-Exhibits 1 through 3 will be admitted into the record.

(Whereupon, ICC Staff Cross-Exhibit Nos. 1 through 4 were admitted into evidence.)

JUDGE DOLAN: Okay.

CROSS-EXAMINATION

BY

MR. MOSSOS:

Q Mr. Segneri, my name is Elias Mossos. I represent the Attorney General's office. And while we have this handy, ICC Staff Cross-Exhibit 4, if I could ask you some questions from this. Just picking up on some of the issues Mr. Fosco raised.

Can I direct your attention to outage I.D. 689056 and 059 that occurred at 11:20 on August 23rd, '07.

A Can you tell me what page.

Q They appear on --

A 689059?

Q Yes, and 056.

A Okay.

Q And, in your opinion, are these 3 separate interruptions -- I guess 2 interruptions are associated with 689059, and one is associated with 689056, are the three of these a single continuous interruption?

A So let's take them one at a time. 689056, if you look about the middle of page, the feeder line, that's J, Joliet, 77484, that indicates that's on an entirely different feeder than the 689059. So that certainly would be a separate outage.

Q How about the two outages associated with 689059, did they start at the same time?

A Right. So since they have the same I.D. number and they're on the same circuit, it looks like that's the example of one of those partial restorations where we did a restoration and returned some of the customers back at noon and the remainder -- or 12:45 and the remainder of the customers at 1310.

Q And, in your opinion, were all of these customers associated with these two outages

constitute a single continuous interruption?

A Correct.

Q And your testimony talks about the effects of a storm that occurred on August 23rd through the 24th of 2007; is that correct?

A Yes.

Q And what time did the storm end on August 24th?

A The actual weather -- I don't know the exact time.

Q Roughly?

A I think it was mid-morning, if I recall.

Q Were there separate storm systems or just one storm system that passed through the area?

A Many separate storm systems.

Q And about 639,000 customers suffered an interruption due to this storm; is that correct?

A Yes.

Q And about 49,907 customers lost power for more than 4 hours?

A I believe that's correct. The number sounds right.

Q And on Page 3 of your rebuttal I believe you state that the interruptions were a direct result of the scope and severity of the August 23rd storm system; is that correct?

A I believe that's what I said here on Page 3.

I'm sorry. I don't know where you quoted --

Q I'm not sure what line.

A It's sounds right.

Q And it's true that the last outage that ComEd reported started on August 28th at about 8:49 p.m.; is that correct?

A That sounds correct.

Q So the outages that ComEd says resulted from the storm occurred several days after the storm system left the area; is that right?

A I guess by your question there were some outages that might not have been associated directly with those severe weather fronts, if that's what you're asking --

Q Yes.

A -- they were within the whole restoration period.

Q Yes. Is it your contention, then, that these outages that weren't caused by a specific weather event were still unpredictable weather damage?

A It very well could have been. That's not uncommon at all.

Q I took your testimony to mean that each and every outage in this Attachment A was due to unpredictable weather damage and the company is seeking a waiver for everyone; is that accurate?

A I'm not sure I would say each and every one, but certainly the 90 percent plus -- you could just look at them and what was the cause and when did it happen and draw the conclusion that they were all due to the weather event.

Q And you stated in response to Mr. Fosco that you determined an interruption was caused by the weather because of the location time and causes of the damage; is that correct?

A Yes.

Q Is there anything in the testimony you have filed under this case that establishes the location time and causes of the interruptions for each of these outages in Attachment A?

A Well, the Attachment A --

Q The location and time. I'm sorry.

A It's certainly this. The background data that this set came from, the cause is a field, as we talked about before -- the causes is a field in that data, yes.

Q So we can't really -- was that tendered to the Attorney General's office or the other parties in this case, response to any data request?

MR. RIPPIE: It wasn't requested.

THE WITNESS: So the individual cause for the individual outage?

MR. RIPPIE: Are you asking whether a data set was tendered to you that contained those columns? The answer is one wasn't requested.

MR. MOSSO: I would request it on the work papers.

MR. RIPPIE: That wasn't his work paper.

BY MR. MOSSOS:

Q Did you rely on this data stat, Mr. Segneri, to form your opinion that's in your testimony that says -- these allegations are unpreventable weather damage -- would cause unpreventable weather damage?

A A lot of the conclusions I drew from there would have been from our summary of all of the outages -- what outage were from what causes. So I had the summary data.

Q So we can't really know by looking at your testimony, can we, whether or not an outage was caused by leaking oil, as in Mr. Fosco's example, or by the weather?

A We can know from my testimony -- I'm going to refer you to the outage storm page, which would be Page 24 or 49 of Exhibit 1.02. It lists all of the causes. So if that supposed leaking transformer occurred, the number would have been so low all of the predominant causes and greater than 99 percent of the cause interruptions are listed on that slide. So it tells you what the calls were, and they were

likely wind, broken limb, tree. Those are the majority of the outages.

Q There's a line here that says "unknown". Could you tell us what "unknown" means.

A "Unknown" would be unknown. In other words, the responding person couldn't determine -- they see a fuse blown or a wire down, but they didn't see evidence of a tree, they didn't see evidence of a wire. So they just say "unknown". There was no specific evidence.

Q Looking at this ICC Cross-Exhibit 4, what does as-built feeder line refer to exactly?

A I'm not sure where you're referring to.

Q It's in the top of every page, 5th column?

A That column is the main line, the main feeder that serves those customers, the main trunk line as we described it before.

Q And "print count," is that the number of customers who suffered an outage?

A Yes.

Q Is there anything in the documents you have submitted as part of your testimony which would

establish what weather event, if any existed, at any point in time?

A I'm not sure I understand the question.

Q So I let's take, for example -- I extracted these from ICC Staff Exhibit 4 just to help us follow along. So you first said it shows two outages in Morris, Illinois. We don't know, do we, what weather event existed in Morris, Illinois, and we don't know that based on anything that's in your testimony, do we?

A We know a series of significant storm fronts came through the entire ComEd territory during that time frame. So did we have any storm measuring equipment right in Morris Illinois? No. But we know from radar and from the outage patterns that we had that there were storm conditions through the whole territory, and this was the start time of 8:26.

Is that what you're saying?

Q Correct. These were several days after the storm front passed?

A Yes.

Q These two outages, outage I.D. 691853 and

692453, you can't attribute these to any specific weather event, can you?

A Not necessarily. So I would say those 31 customers out of 650,000 probably can't draw a direct tie to the storm, correct.

Q Let me direct your attention to Page 10 of your rebuttal testimony. You generally state that winds peaked at more than a hundred miles per hour.

Does that sound about right?

A Repeat the question, please.

Q In your testimony at any point did you say that winds peaked at more than 100 miles per hour?

A Yes.

Q And do you know how long these 100 miles per hour winds last?

A Yes. They were gusts. I don't know the exact duration of the different bursts.

Q But they were not sustained winds for a long period of time?

A No.

Q And were all the -- ComEd has 3 million customers?

A 3.6 million, yes.

Q And did each of those customers -- were all of these customers affected by alleged 100-miles-per-hour wind gusts?

A No, I would not expect that there was 100 miles per hour at every point in the system.

Q Can you tell us which of the customers or which of the outages listed in ICC Staff Cross-Exhibit 4 were caused by these 100 miles an hour wind gusts?

A Without going through each individual, I know the primary -- the most significant weather path was from West Chicago through the Lombard area to the north shore. So those customers, which would be in our northern. Considered in our northern territory -- so it would be towns like Lombard, Villa Park, and then towards the lake, Deerfield, Golf Mill -- those would be the towns that were the most affected by those highest winds?

Q And how do you know that?

A I saw the tornado front, and we have radar readings in our dispatch center where it would

actually show the different wind speeds. I was in the storm center at the time those storms came through.

Q I would like to show you AG Cross-Exhibits 3 and 4. AG Cross-Exhibit 3 is the company's response to AG Data Request 1.03. And AG Cross-Exhibit 4 is the company's response to Data Request 2.01.

Isn't it true that AG Cross-Exhibit 3 reflects that restoration manpower has been dwindling for ComEd over the course of the past several years?

A I'd have to look at what evidence -- this indicates there is less overhead employees than there were in 1998.

Q And AG Cross-Exhibit 4, does that reflect the underground components that were damaged as a result of the August 23rd storm front?

A It looks like -- yes, this looks like it's talking about that.

Q And are all of these items listed on here typically underground items; for instance, fuse table, substation breakers? Are all of those found

underground?

A The material involved is the item that's found underground. The fuse and breakers, those are the devices that -- you know, that are used to switch those materials. So a fuse and a breaker is not underground, but the cable and the cable termination is underground.

Q And does each of this line reflect an outage due to the failure of an underground component or material?

A Yes.

Q And do you know or would you accept, subject to check, that there were 341 separate outage lines listed in this attachment?

A I would accept that.

MR. RIPPIE: Do you mean outages or lines.

MR. MOSSOS: Lines. Each line reflects an outage.

MR. RIPPIE: Do you mean outage codes or lines?

BY MR. MOSSOS:

Q What's reflected on each line?

A Not recalling exactly where this data came

from, this could very well be, as we saw in Appendix A, a restoration sequence. So, in other words, you might have 2 or 3 of these lines with Title 1 outage. That may be the situation.

Q But would you accept, subject to check, there were 34,770 customers who suffered an interruption because of failure of an underground material?

A Subject to check, yes, that sounds about right.

Q And is it your testimony that the alleged intense feelings that you discuss in your testimony in which you discuss a tornado, that they cause unpreventable damage to underground lines?

A I wouldn't attribute wind or tornado to the underground, but the 80,000 strokes of lightning I would attribute.

Q And are any of these attributed to rain or moisture, or just --

A They could be, but the predominant issues during the August 23, 24th time frame was lightning.

Q But we don't know looking at this document

or your testimony what was the cause of each outage, do we?

A No other than there was an underground failure.

Q On the sheet I handed out that was not introduced in the record, the compilation from Attachment A, the second from the last data set shows outages in Wheeling due to the failure of C-1710.

Do you see that?

A Yes.

MR. RIPPIE: It mischaracterizes the compilation. I object to the question. It's a temporary switching, it's not an failure.

BY MR. MOSSOS:

Q Did customers suffer an outage in Wheeling, which is listed as outage I.D. 693147?

A Yes, those were -- when we added that up somewhere around 148 customers would have been out with that outage I.D., yes.

Q And what was this outage caused by?

A It looks like the equipment involved was cable.

Q And the first outage identified on this list that lasted for about 20 hours?

A Yes.

Q And do we know whether or not C-1710 is an underground component?

A That feeder -- that's a designation for a feeder. It probably has overhead sections and underground sections. The fact that there was cable involved tells me that there is a portion of the feeder that's underground.

Q And do we know whether or not the failure occurred above ground or underground?

A From this it appears it was underground -- table.

MR. RIPPIE: Can the witness have an opportunity to look at all the lines that reference that same interruption code.

MR. MOSSOS: Sure.

MR. RIPPIE: Would that help you, potentially?

THE WITNESS: It would.

MR. RIPPIE: I'll try a search.

BY MR. MOSSOS:

Q If you look to Page 4 of AG Cross-Exhibit 4 listing the underground components...?

A Okay.

Q Isn't it true that about 8 or 9 lines down feeder C-1710 appears?

A Yes. I see it.

Q It's still your contention then that the outage I.D. 693147 in Wheeling was caused due to an underground component?

A Yes, it looks like it is.

Q And do we know exactly what weather event in Wheeling caused this failure?

A All I know is that the date it occurred was underground failure. I don't know that I can directly tie those 148 customers to any particular weather event.

Q Do you know whether or not there was lightning in Wheeling on August 26th?

A On August 26th? I don't have that data in front of me. I don't know.

Q So these customers listed right here in Wheeling, it's true they did not lose power on the

23rd or 24, is that correct, during the storm system?

A That's correct.

Q And they didn't lose power on 25th either?

A That's correct -- well, from this, I don't know if they had a previous outage. It doesn't indicate that they did.

Q Is it your contention that they suffered unpreventable weather or these outages were caused by unpreventable weather damage?

A It could have been.

Q If I could refer your attention to Page 14 of your rebuttal testimony...?

A Page 14. Okay.

Q In there you define an interruption, and you say that in the industry it means a discrete event caused by the failure of a piece of equipment or directly connected groups of equipment that affect a discrete set of customers and has a specific start time and duration to full restoration.

Can you please tell me what source you relied on for this statement.

A Tell me the line number, please.

THE WITNESS: That would be both the 411 definition of interruption and the definition that we use to define our outage events.

Q In your opinion -- and I think you might have answered this before -- if customers have an outage due to the same equipment failure and the same start time and if the end times are different, in your opinion, that's the same continuous interruption; is that correct?

A Yes, in that scenario where I would have one event and then multiple restorations due to that event, yes, that would still be tied to one event.

Q And if I can point your attention to Page 3 of your rebuttal testimony. I believe it states that the weather damage the system experienced was unpreventable regardless of the age of the system.

Are you saying that even if a piece of equipment was aged past its useful life span it would not matter in this case?

A What I'm saying is a tree or lightning that hits our facility and causes it to fail is independent of how old that piece of equipment is.

That's what I'm saying.

Q How often does ComEd inspect its wood poles and/or crossarms?

A We do a circuit patrol every 4 years. So that's where it's visually inspected, every 4 years.

Q And in your rebuttal testimony you state that the age of ComEd's facilities did not cause or contribute the damage to the system or to the interruptions. That's on Lines 56 through 58.

A Yes.

Q And you go on to conclude that the interruption was due to the weather.

So is it your testimony that not one of the outages listed in this Attachment A were caused by the age of ComEd's system?

A There's nothing in there that would indicate it was age. It's only the weather event that would indicate there was an outage caused.

Q There's nothing in there to actually show an outage due to weather, is there?

A There is a lot of indication of outage due to weather: a tree, lightning.

Q Can a tree fall on the line when there's no adverse weather event?

A Sure, it can. Yes.

Q Did you examine any of the equipment that was damaged or destroyed as part of the storm?

A Me personally?

Q Or the people under your direction?

A The people in the company, certainly they were on site and saw the equipment at that time.

Q And did anyone conduct an analysis that collected the dates that the damaged equipment was first put into service?

A Not that I'm aware of. I don't believe we did any detailed analysis like that.

Q Do crossarms last longer than wooden poles?

A They're both pieces of wood. I mean, I don't know -- in general, I think our system average age is less for crossarms than poles, but that isn't necessarily an indication of their degradation. You think a crossarm would get replaced as new customers are added or new wires are put up. So you wouldn't replace a pole, but you would replace a crossarm. So

the fact that our crossarms are on average younger, it has nothing to do with their deterioration or ability to change. It's that they're changed more often because you add a new transformer or you double up a circuit.

And you wouldn't go and change the pole, but you wouldn't change the crossarm. So I wouldn't jump to a conclusion that the crossarms are in worse condition than the pole or last less than the poles. I don't think that's a valid conclusion.

Q Thank you.

And I think, finally, if I can direct your attention to Page 22 of ComEd's Exhibit 1.02, can you tell me who prepared this graph that appears in this picture.

A Do you have a better copy? The particular copy I have is all black. I'm familiar with that picture.

I don't exactly who did that. That would have been our engineering staff who go information through NOWA. This might have come directly either from the NOWA Web site or we

transposed the information.

Q And do we know what date this is supposed to reflect?

A It would have been August 23rd, I believe.

Q And do we know what time is reflected by this?

A I don't know the exact time, but I know the tornado came through sometime mid afternoon.

Q And do we know what time the tornado touched down?

A It would have been about the same time. 2:00 in the afternoon, 3:00 in the afternoon, in that time frame.

MR. MOSSOS: Thank you very much. I have no further questions.

JUDGE DOLAN: Thank you. Redirect?

MR. RIPPIE: If we could have about 5 minutes.

JUDGE DOLAN: Certainly.

REDIRECT EXAMINATION

BY

MR. RIPPIE:

Q Mr. Segneri, do you recall

cross-examination by Mr. Fosco concerning the definition of interruptions contained in Part 411 of the Illinois Commerce Commission's rules?

A Yes.

Q In the absence of that have definition, pretend Part 411 didn't exist -- would Commonwealth Edison define interruption any differently?

A No. That definition would be something as normal utility application, normal utility use of defining an interruption.

Q And why is that the normal utility definition of an interruption?

A It's the accepted practice. It's the logical approach to an event that happened here. It was a discrete number of customers, that they were interconnected. And some event that happened on a separate portion of the system that was not interconnected, it wouldn't be logical to lump those. So it would just be the practical interpretation or application of interruption.

Q Let me ask you a few technical questions about the spreadsheet that is both attached to the

petition and was provided by Staff in an updated form.

A Appendix A?

Q Appendix A.

A Okay.

Q To be clear, in ComEd's view does each row of that chart represent an interruption, or does each interruption code represent an interruption even if there are multiple rows associated with that code?

A If I understand your question, each interruption code or outage I.D. represents an interruption. So we said there was 4200-some interruptions. There's way more than 4200 lines in this spreadsheet.

So did that answer your question?

Q So ComEd has not counted an interruption that affected customers in 5 municipalities as 5 separate interruptions?

A No.

Q Now, are there any cause codes represent- -- any causes represented in Appendix A that are non-storm causes such as vandalism,

third-party dig in, tampering, or the like?

A I don't believe they are. I do not recall seeing anything like that.

Q Now, you testified concerning high voltage lines feeding substations, the failure of which could cause an interruption affecting more than 30,000 customers.

Do you recall that testimony?

A Yes.

Q I'm going to ask you technically with an eye towards the formal functionalization of those facilities, could such lines be functionalized as either transmission or distribution?

A Yes. You're referring to the FERC, the Federal --

Q FERC jurisdictional boundaries?

A A high voltage 138,000 volt line could be designated as a distribution high voltage line or a transmission, yes.

Q And if it was a radio line, the failure of which would be likely to cause a substation to be interrupted, that is not part of the loop, would it

be more likely to be transmission or would it be more likely to be distribution?

A Distribution.

Q Mr. Mossos asked you some questions about the detailed information displayed on Attachment A. In your opinion, is the information expressed in Attachment A and in your testimony and in the work papers that you reviewed sufficient to reach a conclusion within a reasonable degree of engineering certainty as to the cause of the outages for which ComEd seeks a waiver?

A Pretty overwhelmingly with the large number much events and the relatively few number of causes that, as we saw, were 90 percent of the customer interruptions were due to lightning, wind, trees, which would all be related to the storm. So, yes, I will say the evidence is pretty overwhelmingly consisted of the storm.

Q Now, we focused -- or he focused with you at some length on 3 rows affecting some customers in Wheeling due to the outage of a cable.

Can you explain how an underground

cable failure can occur 2 or 3 days after a storm event passes through an area?

A How could it happen 2 or 3 days after the storm event and still be that we claim it's attributed to the storm?

Q Yes. You asked the question better than I did.

A Well, actually in a couple different ways. After a storm front comes through -- you've got heavy wind and lightning -- just because I don't have an outage on a piece of equipment that doesn't mean I don't have a dangling tree or a broken crossarm that has not caused an outage or an interruption, but it's an adverse situation. Just like lightning can hit a piece of cable and it might not damage it right at that instant enough to cause an outage, but it's breached the cable, it's caused maybe a hole in it, and it's Okay. But then as moisture gets into the cable after a couple of days, then it fails.

So with the number of underground failures that we had -- and some of them happened during the storm window and some of them a couple

days after the storm window -- it's absolutely reasonable and consistent with past experience that those failures are attributed to the lightning event that we had.

I mean, a normal storm in ComEd where we -- which would be severe, a hundred thousand customers -- we might have 12 or is 13,000 strokes of lightning. This had 80,000 strokes of lightning. So the residual damage is going to be there. So that's not at all unexpected that we would have those outages even a couple or 3 days after the fact.

MR. RIPPIE: That's all I have. Thank you.

JUDGE DOLAN: Any recross?

MR. FOSCO: Not from Staff.

MR. MOSSOS: A couple.

RECROSS-EXAMINATION

BY

MR. MOSSOS:

Q In the last question Mr. Rippie asked you -- you talked about residual damage and you brought up a dangling tree and a crossarm that could cause an outage.

But would these be -- would these cause an outage to an underground component several days later?

A Sure. What does lightning do to a cable? The lightning gets on the cable and then it has to leave the cable and go to the ground, and it causes a hole in the insulation of the cable. That may or may not cause a failure right at that time, so you've got a hole. Then over a couple days rain or other water moisture gets in there, and then it fails.

So we get maybe 30 underground failures a day on our big system. With this large number corresponding right after the lightning event, you don't have to do a lot of calculations, of course, on all of those underground failures to the storm.

Does that answer your question?

Q I believe.

You say you get 30 underground failures under normal conditions. What would these be caused by, if not lightning?

A Previous lighting, other dig-ins, multiple

causes.

MR. MOSSOS: No further questions.

JUDGE DOLAN: Are you going to put --

MR. MOSSOS: Yes, your Honor. AG Cross-Exhibits 3 and 4 into the record.

JUDGE DOLAN: AG Cross-Exhibits 3 and 4 will be admitted into the record.

(Whereupon, AG Cross-Exhibits No. 3 and 4 were admitted into evidence.)

JUDGE DOLAN: Okay. That's it then. Okay.

MR. RIPPIE: That concludes the -- I believe certainly the company's evidence. I believe it concludes everybody's evidence.

Let's go off the record.

(Whereupon, a discussion was had off the record.)

JUDGE DOLAN: A discussion was held off the record concerning the motion to bifurcate the hearings, and I am going to grant that motion to bifurcate. So the parties are going to provide briefs addressing the waiver issue only.

And by agreement of the parties, Commonwealth Edison will file their initial brief on or before September 5th, 2008. Any responses to those -- to that brief will be due on September 19th, 2008 and any replies to the responses will be due on September 26th, 2008.

And with that, I will mark this record heard and taken.

HEARD AND TAKEN.